

LAFARGE CANADA INC.

AMBIENT AIR QUALITY MONTHLY REPORT OCTOBER 2023

NOVEMBER 27, 2023



wsp



AMBIENT AIR QUALITY MONTHLY REPORT

OCTOBER 2023

LAFARGE CANADA INC.

PROJECT NO.: 171-00556-05
DATE: NOVEMBER 27, 2023

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November 27, 2023

LAFARGE CANADA INC.
Highway 1A
Exshaw, AB T0L 2C0

Attention: Nikolaos Veriotes P. Eng.

Dear Mr. Veriotes,

Subject: Ambient Air Quality Monthly Report – October 2023

The following table summarizes the data completeness and reported exceedances of Alberta Ambient Air Quality Objectives (AAAQOs) or Guidelines (AAAQG) at the Lagoon Station for October 2023.

Lagoon	Data Completeness (%)	1-Hour Average	24-hour Average
		Exceedances of AAAQO or AAAQG	Exceedances of AAAQO
TSP	100.0%	-	0
PM _{2.5}	99.9%	0	0
PM ₁₀	95.6%	-	-
NO	100.0%	-	-
NO ₂	100.0%	0	-
NO _x	100.0%	-	-
SO ₂	100.0%	0	0
Temperature	94.6%	-	-
Wind Speed / Direction	81.2%	-	-
Pressure	94.6%	-	-
Relative Humidity	94.6%	-	-
Precipitation	100.0%	-	-

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The following table summarizes the data completeness and reported exceedances of Alberta Ambient Air Quality Objectives (AAAOs) or Guidelines (AAAQG) at the Windridge Station for October 2023.

Windridge	Data Completeness (%)	1-Hour Average	24-hour Average	
		Exceedances of AAAQG	Exceedances of PM _{2.5} AAAQO	Exceedances of TSP AAAQO
TSP	100.0%	-	-	6
PM _{2.5}	99.9%	0	0	-
PM ₁₀	100.0%	-	-	-

The GRIMM monitors are considered Industrial Ambient Monitors and are meant for assessing the performance of Lafarge Exshaw’s Fugitive Dust Control Best Management Practices – Program; the GRIMM monitors are not Air Monitoring Directive (AMD) compliant. This Program uses the AAAQOs as Guidelines. The following table summarizes the data completeness and exceedances of the Guidelines at the GRIMM Monitors for October 2023.

GRIMM Stations	Data Completeness (%)	1-Hour Average	24-hour Average	
		Exceedances of PM _{2.5} Guidelines	Exceedances of PM _{2.5} Guidelines	Exceedances of TSP Guidelines
West	93.5%	0	0	0
Berm	93.7%	1	0	8
Entrance	0%	0	0	0

I certify that I have reviewed and verified this report and that the information is complete, accurate and representative of the monitoring results, reporting timeframe and the specified analysis, summarization, and reporting requirements.

Sincerely,

Tyler Abel, M.Sc.
Senior Air Quality Specialist,
Vancouver Region

SIGNATURES

PREPARED BY



November 27, 2023

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Vancouver Region, Environment

Date

APPROVED¹ BY *(must be reviewed for technical accuracy prior to approval)*



November 27, 2023

Tyler Abel, M.Sc.
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Vancouver Region, Environment

Date

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A DATA & CALIBRATION REPORTS

1 INTRODUCTION

This report summarizes the ambient air quality and meteorological data collected at the Lagoon, Windridge, and GRIMM monitors in Exshaw, AB (Figure 1-1). The stations are operated by WSP on behalf of Lafarge Canada Inc. (Lafarge) and are a requirement of Lafarge’s Approval 1702-02-04. This report contains data collected between October 1, 2023 and October 31, 2023.

This monthly report was prepared by Tuonan Li, Air Quality Specialist with WSP, on behalf of Lafarge and was reviewed by Tyler Abel, Senior Air Quality Specialist at WSP.

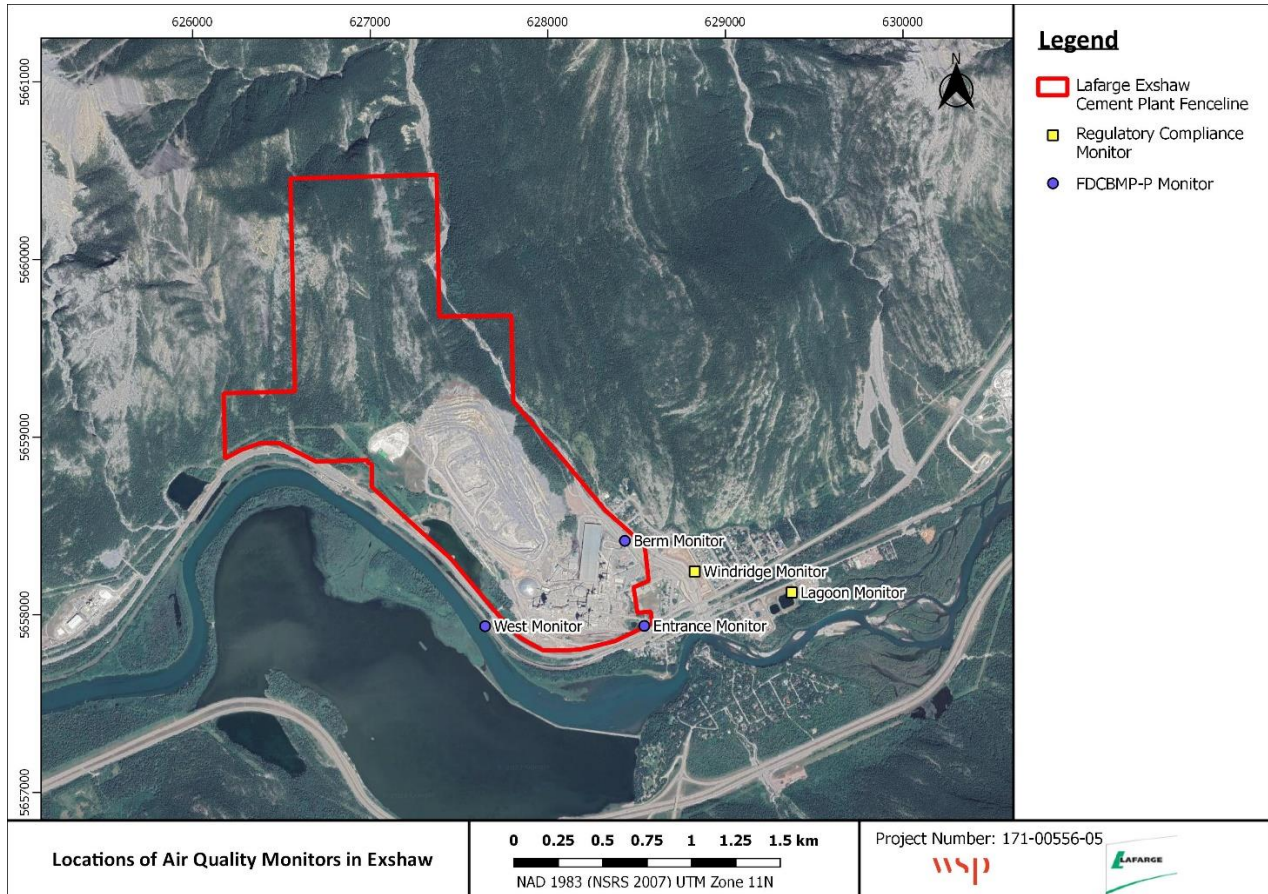


Figure 1-1 Locations of Air Quality Monitors in Exshaw

1.1 EXSHAW CREEK FLOOD MITIGATION

Due to flood mitigation construction at Exshaw creek (Figure 1-2), the Windridge monitoring station was taken out of operation and removed from the site on April 8, 2019. The flood mitigation work was completed in Summer 2020. The Windridge station was reinstalled on September 1, 2020. The flood mitigation work has left an exposed creek bed area (see Figure below) that is a potential source of fugitive dust between Lafarge’s eastern fenceline and the Windridge station.



Figure 1-2 Photo of Completed Flood Mitigation Work at Exshaw Creek

2 OCTOBER 2023 REPORT SUMMARY

This summary section provides the pertinent details on data collected and maintenance/calibration activities at each of the monitoring locations. The monitoring results for each station are described in further detail in their corresponding sections. Maximum hourly concentrations are shown for all particulate matter size fractions, but there are no Alberta Ambient Air Quality Objectives (AAAQO) for 1-hour PM concentrations. The exceedances reported for 1-hour PM_{2.5} are those above the 1-hour PM_{2.5} Alberta Ambient Air Quality Guidelines (AAAQG).

2.1 LAGOON STATION

Table 2-1 Lagoon station data summary

Parameter	Data Completeness (%)	1-Hour Average		24-hour Average	
		Maximum Concentration	Exceedances of AAAQO or AAAQG	Maximum Concentration	Exceedances of AAAQO
NO₂ (ppb)	100.0	23.8	0	10.2	-
SO₂ (ppb)	100.0	8.1	0	2.1	0
PM_{2.5} (µg/m³)	99.9	18.2	0 ¹	6.9	0
PM₁₀ (µg/m³)	95.6	127.4	-	44.5	-
TSP (µg/m³)	100.0	279.4	-	89.0	0
Temperature (°C)	94.6	23.2	-	14.5	-
Wind Speed (km/hr) /Direction (Degrees)	81.2	37.5/W	-	28.8/WSW	-
Precipitation (mm)	100.0	0.5 ²	-	5.5 ³	-

¹ Any exceedances reported for 1-hour PM_{2.5} are over the guideline level (AAAQG) of 80 µg/m³.

² Maximum Daily Total Accumulation of Precipitation (mm) – freezing temperatures can impact the precipitation totals in winter months

³ Monthly Total Accumulation of Precipitation (mm) - freezing temperatures can impact the precipitation totals in winter months

Data Quality Notes:

- There were no exceedances of the 24-hour PM_{2.5} AAAQO.
- There were no exceedances of the 1-hour PM_{2.5} AAAQG.
- There were no exceedances of the 24-hour TSP AAAQO.

Calibration/Maintenance Notes:

- At the Lagoon station, NO₂ and SO₂ analyzers recorded 100% uptime during the month of October.
- The TSP analyzer recorded 100% uptime for the month of October.
- The precipitation gauge recorded 100% uptime for the month of October.
- The PM_{2.5} analyzer recorded 99.9% uptime for the month of October due to one hour of equipment malfunction occurring on October 18th at 11:00.
- The PM₁₀ analyzer recorded 95.6% uptime for the month of October due to 11 hours of equipment malfunction occurring on October 13th at 24:00 – October 14th at 10:00. Further, 22 hours of non-routine maintenance occurring on October 11th at 11:00 – October 15th at 8:00.
- The temperature sensor recorded 94.6% uptime during the month of October due to 25 hours of maintenance occurring on October 18th at 10:00 – October 19th at 10:00. Further, 15 hours of non-routine maintenance occurring on October 31st at 10:00 – 24:00.
- The wind sensor recorded 81.2% uptime during the month of October due to 25 hours of maintenance occurring on October 18th at 10:00 – October 19th at 10:00. Further, 98 hours of equipment malfunction occurring on October 27th at 6:00 – October 31st at 7:00. Lastly, 17 hours of non-routine maintenance occurring on October 31st at 8:00 – 24:00.

2.2 WINDRIDGE STATION

Table 2-2 Windridge station data summary

Parameter	Data Completeness (%)	1-Hour Average		24-hour Average	
		Maximum Concentration	Exceedances of AAAQG	Maximum Concentration	Exceedances of AAAQO
PM _{2.5} (µg/m ³)	99.9	13.0	0*	5.4	0
PM ₁₀ (µg/m ³)	100.0	382.0	-	148.7	-
TSP (µg/m ³)	100.0	670.0	-	245.5	6

* Any exceedances reported for 1-hour PM_{2.5} are over the guideline level (AAAQG) of 80 µg/m³.

Data Quality Notes:

- There were no exceedances of the 24-hour PM_{2.5} AAAQO.
- There were no exceedances of the 1-hour PM_{2.5} AAAQG.
- There were six days exceeding the 24-hour TSP AAAQO.

Calibration/Maintenance Notes:

- At the Windridge station, the TSP and PM₁₀ analyzers recorded 100% uptime for the month of October.
- The PM_{2.5} analyzer recorded 99.9% uptime for the month of October due to one hour of equipment malfunction occurring on October 31st at 1:00.

2.3 WEST GRIMM

The GRIMM monitors are Industrial Ambient Monitors meant to aid Lafarge in assessing the performance of their Fugitive Dust Control Best Management Practices – Program (FDCBMP-P). The AAAQO are used as Guidelines to evaluate the performance of the FDCBMP-P; however, these Industrial monitors are not Alberta Air Monitoring Directive (AMD) compliant and not required to show compliance with the AAAQO.

Table 2-3 West station data summary

Parameter	Data Completeness (%)	1-Hour Average		24-hour Average	
		Maximum Concentration	Exceedances of Guidelines	Maximum Concentration	Exceedances of Guidelines
PM _{2.5} (µg/m ³)	93.5	19.7	0*	9.4	0
PM ₁₀ (µg/m ³)	93.5	29.2	-	13.4	-
TSP (µg/m ³)	93.5	33.8	-	14.9	0

* Any exceedances reported for 1-hour PM_{2.5} are over the guideline level (AAAQG) of 80 µg/m³.

Data Quality Notes:

- There were no exceedances of the 24-hour PM_{2.5} Guidelines.
- There were no exceedances of the 1-hour PM_{2.5} Guidelines.
- There were no exceedances of the 24-hour TSP Guidelines.

Calibration/Maintenance Notes:

- The PM_{2.5}, PM₁₀, and TSP analyzers recorded 93.5% uptime during the month of October due to 48 hours of equipment malfunction occurring on October 27th at 15:00 – October 29th at 14:00.

2.4 BERM GRIMM

The GRIMM monitors are Industrial Ambient Monitors meant to aid Lafarge in assessing the performance of their FDCBMP-P. The AAAQO are used as Guidelines to evaluate the performance of the FDCBMP-P; however, these Industrial monitors are not Alberta Air Monitoring Directive (AMD) compliant and not required to show compliance with the AAAQO.

Table 2-4 Berm station data summary

Parameter	Data Completeness (%)	1-Hour Average		24-hour Average	
		Maximum Concentration	Exceedances of Guidelines	Maximum Concentration	Exceedances of Guidelines
PM _{2.5} (µg/m ³)	93.7	84.0	1*	26.2	0
PM ₁₀ (µg/m ³)	93.7	711.7	-	209.1	-

TSP ($\mu\text{g}/\text{m}^3$)	93.7	2254.2	-	797.5	8
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* Any exceedances reported for 1-hour $\text{PM}_{2.5}$ are over the guideline level (AAAQG) of $80 \mu\text{g}/\text{m}^3$.

Data Quality Notes:

- There were no exceedances of the 24-hour $\text{PM}_{2.5}$ Guidelines.
- There was one exceedance of the 1-hour $\text{PM}_{2.5}$ Guidelines.
- There were eight exceedances of the 24-hour TSP Guidelines.

Calibration/Maintenance Notes:

- The $\text{PM}_{2.5}$, PM_{10} , and TSP monitors recorded 93.7% uptime during the month of October due to 47 hours of equipment malfunction occurring on October 27th at 15:00 – October 29th at 12:00, and October 31st at 13:00.

2.5 ENTRANCE GRIMM

The GRIMM monitors are Industrial Ambient Monitors meant to aid Lafarge in assessing the performance of their FDCBMP-P. The AAAQO are used as Guidelines to evaluate the performance of the FDCBMP-P; however, these Industrial monitors are not Alberta Air Monitoring Directive (AMD) compliant and not required to show compliance with the AAAQO.

Calibration/Maintenance Notes:

- The analyzer had 0% uptime for the month of October due to collection error (i.e., communication error).

3 LAGOON STATION

The Lagoon trailer contains NO_x, SO₂, TSP, PM₁₀, and PM_{2.5} analyzers as well as meteorological sensors, and is shown in Figure 3-1. An ambient air quality station has been at this location since 2002, providing a long-term data record for air quality in the Exshaw area.

This section provides a summary of the monitoring activities for the Lagoon ambient air quality station, including: a table of instrumentation (Table 3-1), a data summary table (Table 3-2), site visit notes and tables and graphs illustrating the monitoring results for October 2023.

All of the monitors comply with Alberta Environment and Parks Air Monitoring Directive (2016).

3.1 OPERATIONAL SUMMARY

A summary of the station operation for the month is provided in Table 3-1.

Table 3-1 Instrumentation List at the Lagoon Station

Parameter Measured	Equipment Description	Notes
PM_{2.5} Concentrations	MetOne BAM-1020 FRM Continuous Particulate Monitor	The PM _{2.5} monitor was calibrated on October 30 th . The monitor had 99.9% uptime for the month of October due to one hour of equipment malfunction occurring on October 18 th at 11:00.
PM₁₀ Concentrations	MetOne BAM-1020 Continuous Particulate Monitor	The PM ₁₀ monitor was calibrated on October 30 th . The monitor had 95.6% uptime for the month of October due to 11 hours of equipment malfunction occurring on October 13 th at 24:00 – October 14 th at 10:00. Further, 22 hours of non-routine maintenance occurring on October 11 th at 11:00 – October 15 th at 8:00.
TSP Concentrations	MetOne BAM-1020 Continuous Particulate Monitor	The TSP monitor was calibrated on October 30 th . The monitor had 100% uptime for the month of October.
Oxides of Nitrogen	TEI 42C	The NO _x monitor was calibrated on October 4 th . The monitor had 100% uptime for the month of October.
Sulphur Dioxide	Teledyne API 102A	The SO ₂ monitor was calibrated on October 4 th . The monitor had 100% uptime for the month of October.
Precipitation	MetOne 130 Rain/Snow Gauge	The monitor had 100% uptime for the month of October.

Wind Speed	MetOne Wind Sensor	The monitor had 81.2% uptime during the month of October due to 25 hours of maintenance occurring on October 18 th at 10:00 – October 19 th at 10:00. Further, 98 hours of equipment malfunction occurring on October 27 th at 6:00 – October 31 st at 7:00. Lastly, 17 hours of non-routine maintenance occurring on October 31 st at 8:00 – 24:00.
Wind Direction		
Ambient Temperature	MetOne Ambient Temperature Sensor	The monitor had 94.6% uptime during the month of October due to 25 hours of maintenance occurring on October 18 th at 10:00 – October 19 th at 10:00. Further, 15 hours of non-routine maintenance occurring on October 31 st at 10:00 – 24:00.



Figure 3-1 Inlets on the top of WSP’s Lagoon monitor

3.2 MONITORING RESULTS AND TRENDS

Table 3-2 summarizes the hourly and daily concentrations recorded in October 2023. Figure 3-2 graphically illustrates the time series for hourly concentrations as well as wind speed and direction, while Figure 3-8 shows daily average concentrations recorded during October 2023 for the pollutants listed in Table 3-2. Additionally, Figure 3-3 to Figure 3-7 show the histograms of the hourly concentrations of NO₂, SO₂, PM_{2.5}, PM₁₀, and TSP measured at the Lagoon station.

There were no exceedances of the 24-hour TSP AAAQO (100 µg/m³), the 24-hour PM_{2.5} AAAQO (29 µg/m³) or the 1-hour PM_{2.5} AAAQG (80 µg/m³) at the station this month.

Historically in October, the average number of 24-hour TSP AAAQO exceedances and 24-hour PM_{2.5} AAAQO exceedances are both 0. The maximum number of 24-hour TSP AAAQO exceedances recorded in October were 2 days in 2022.

At the Lagoon station strong wind gusting that typically occurs in the area contributes to increased particulate levels that may arise from multiple sources including the Lafarge Plant, Exshaw Creek, dry sections of the Bow River, highway and rail traffic moving past the station and fugitive emissions from open areas.

Table 3-2 Summary of October 2023 data at Lagoon

Parameter	Guideline / Objectives		Station	Exceedances		Monthly		1-hour				24-hour		Operational Time (Percent)	
	1-hr	24-hr		1-hr	24-hr	Minimum	Average	Maximum Concentration/ Meteorological Variable	Day	Hour	Wind Speed (km/hr)	Wind Direction (degrees)	Maximum Concentration/ Meteorological Variable		Day
NO₂ (ppb)	159	-	Lagoon	0	-	0.5	6.5	23.8	8	21	6.3	205.4	10.2	5	100.0
SO₂ (ppb)	172	48	Lagoon	0	0	0.0	0.6	8.1	16	5	12.2	246.2	2.1	16	100.0
PM_{2.5} (µg/m³)	80	29	Lagoon	0	0	0.0	2.9	18.2	5	7	11.9	48.0	6.9	31	99.9
PM₁₀ (µg/m³)	-	-	Lagoon	-	-	0.0	17.1	127.4	10	6	29.2	256.1	44.5	10	95.6
TSP (µg/m³)	-	100	Lagoon	-	0	0.0	30.4	279.4	10	6	29.2	256.1	89.0	10	100.0
Temperature (°C)	-	-	Lagoon	-	-	-13.2	4.9	23.2	9	16	17.5	243.3	14.5	10	95.2
Wind Speed (km/hr)/Direction (degrees)	-	-	Lagoon	-	-	1.0	16.8	37.5/W	23	15	37.5	301.3	28.8/WSW	17	81.7
Precipitation (mm)	-	-	Lagoon	-	-	0.0	0.0	0.5 ¹	12	11	7.6	54.1	5.5 ²	-	100.0

¹ Maximum Daily Total Accumulation of Precipitation (mm) - freezing temperatures can impact the precipitation totals in winter months

² Monthly Total Accumulation of Precipitation (mm) - freezing temperatures can impact the precipitation totals in winter months

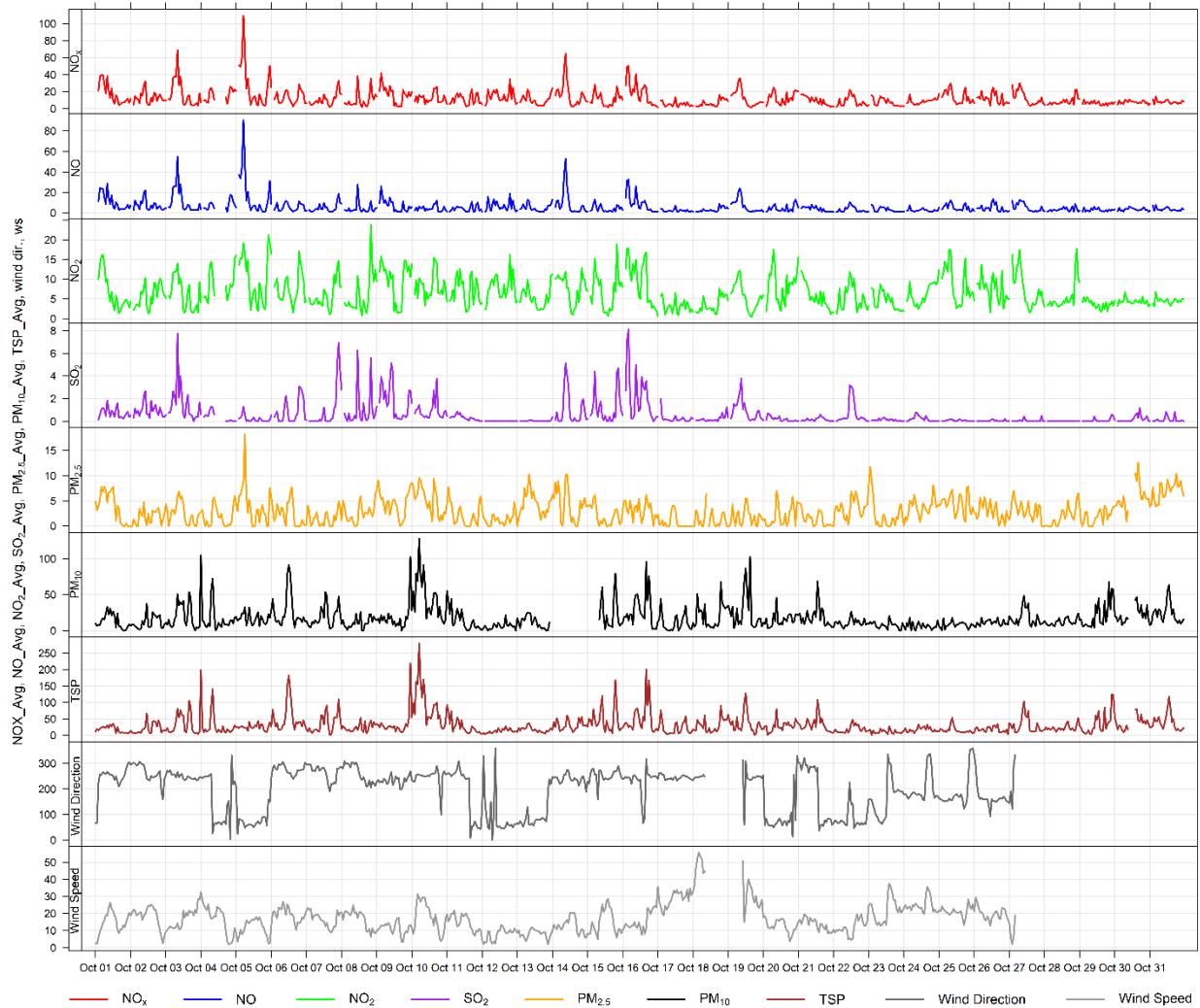


Figure 3-2 1-hour concentrations of NO_x, SO₂, particulate matter, wind direction and wind speed at the Lagoon station

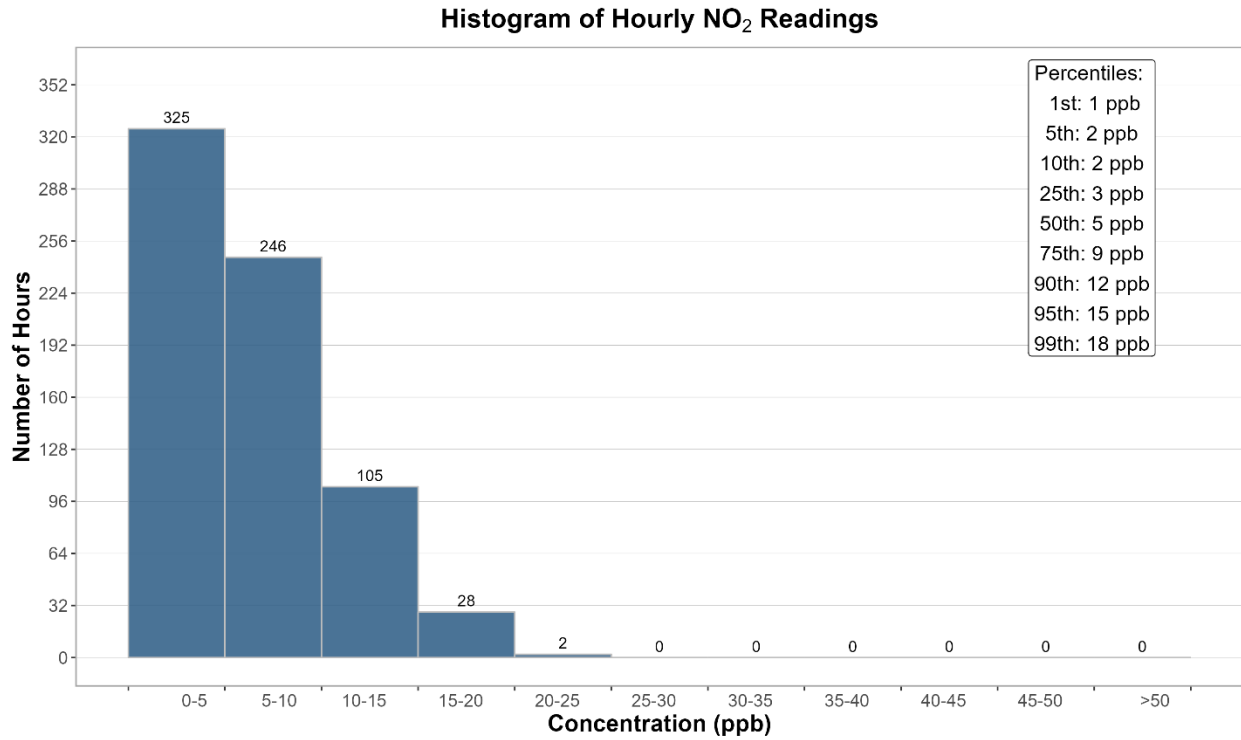


Figure 3-3 Histogram of hourly NO₂ concentrations at the Lagoon station

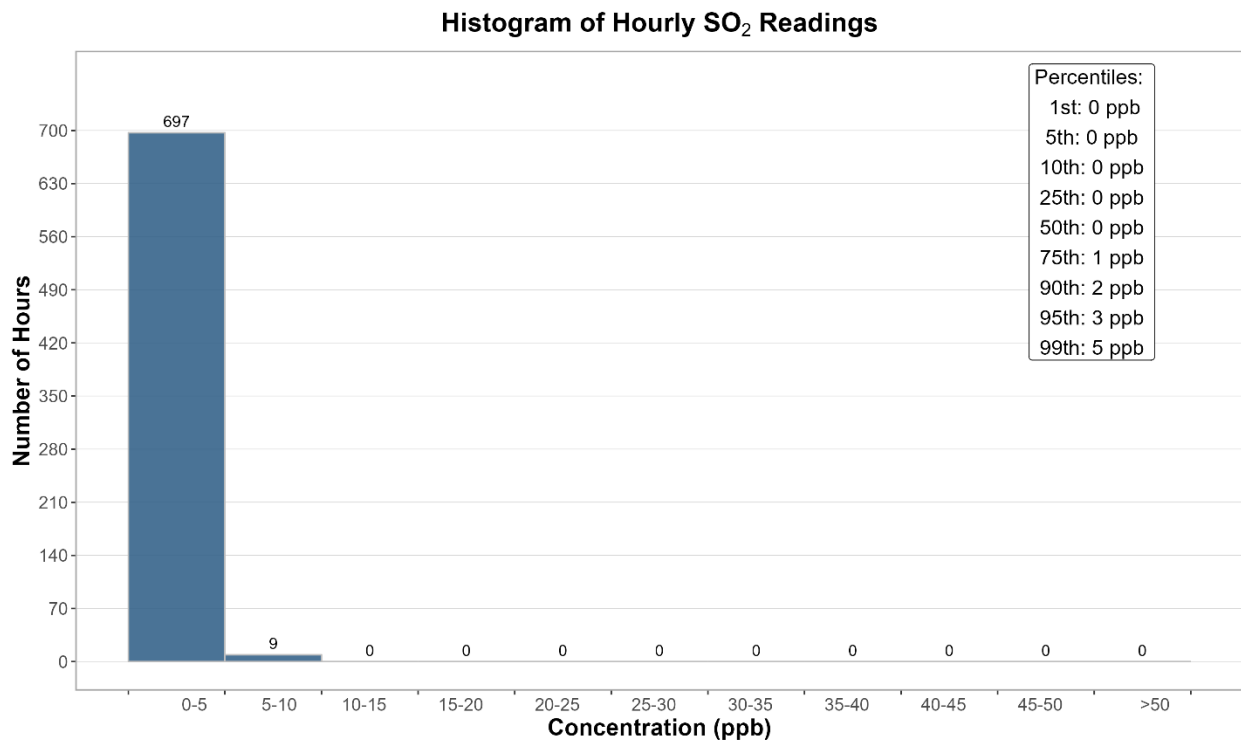


Figure 3-4 Histogram of hourly SO₂ concentrations at the Lagoon station

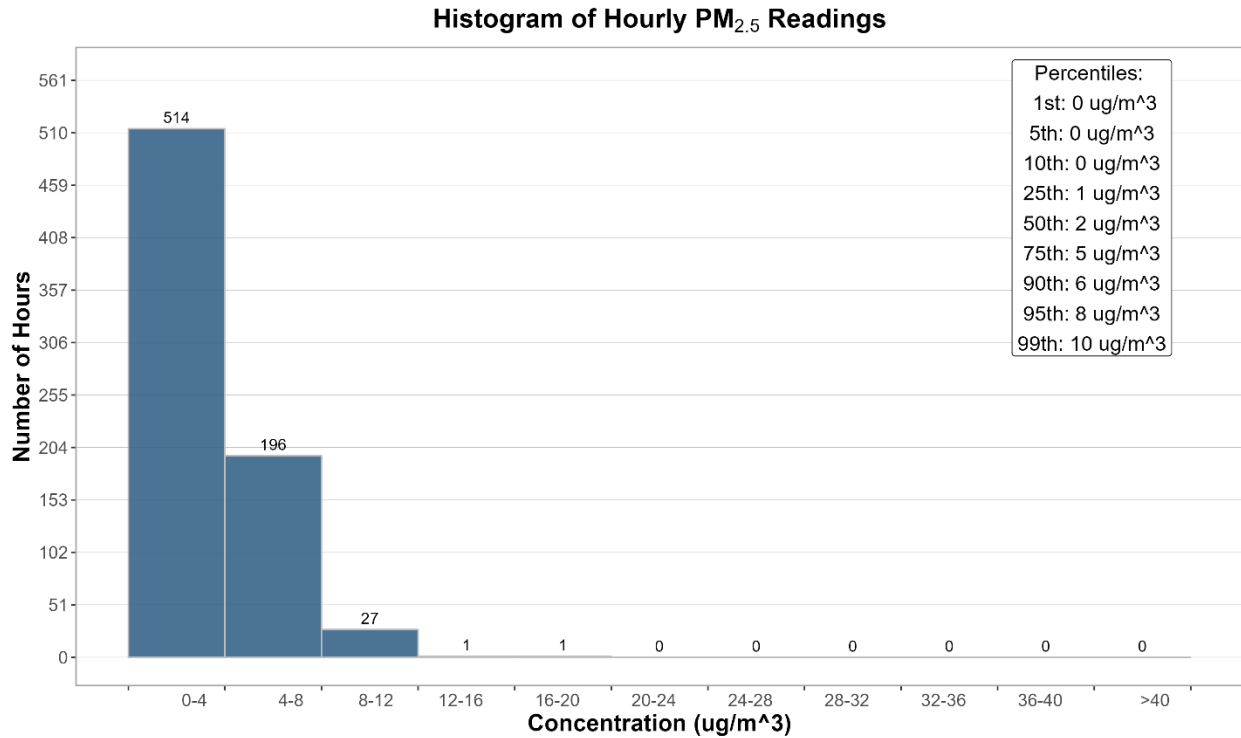


Figure 3-5 Histogram of hourly PM_{2.5} concentrations at the Lagoon station

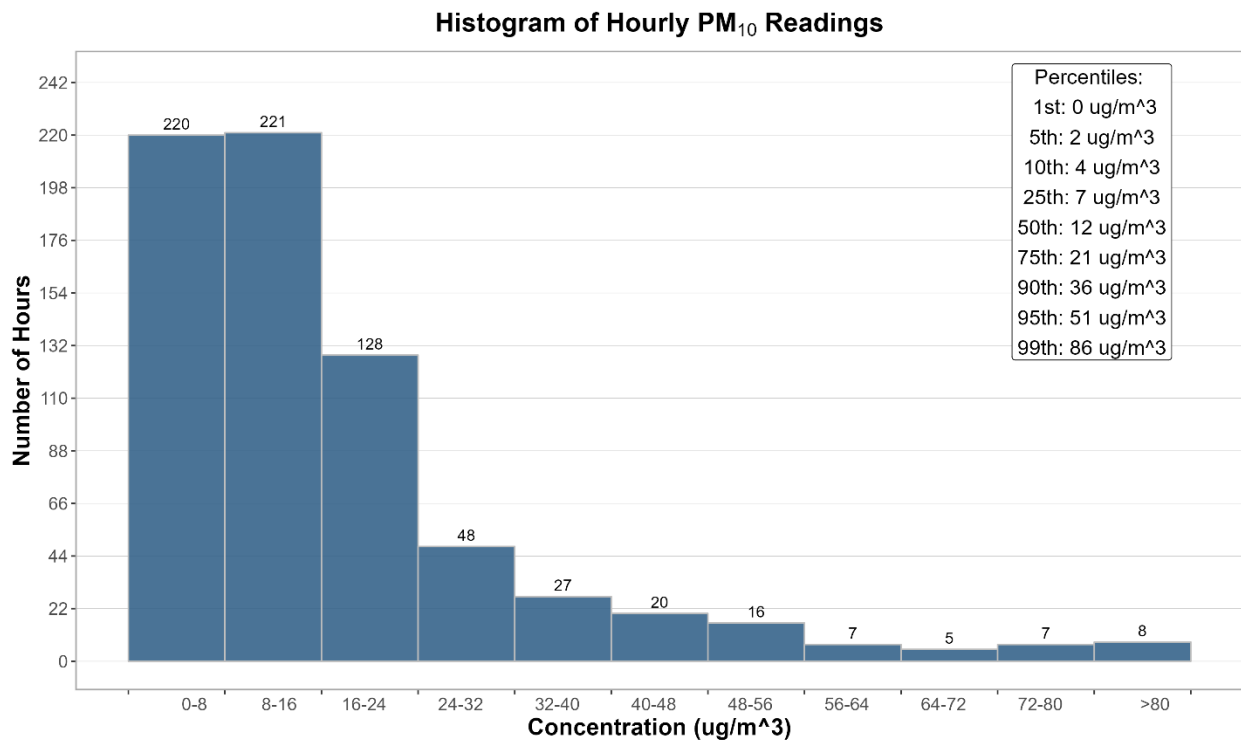


Figure 3-6 Histogram of hourly PM₁₀ concentrations at the Lagoon station

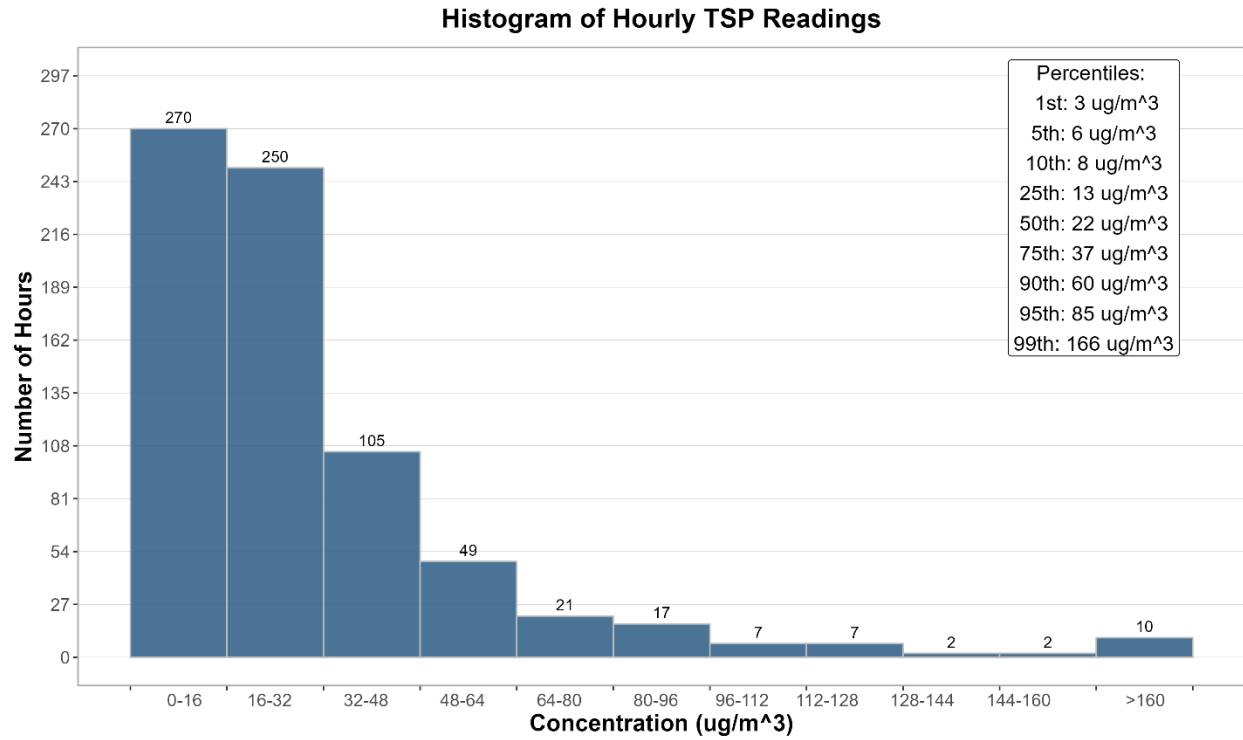


Figure 3-7 Histogram of hourly TSP concentrations at the Lagoon station

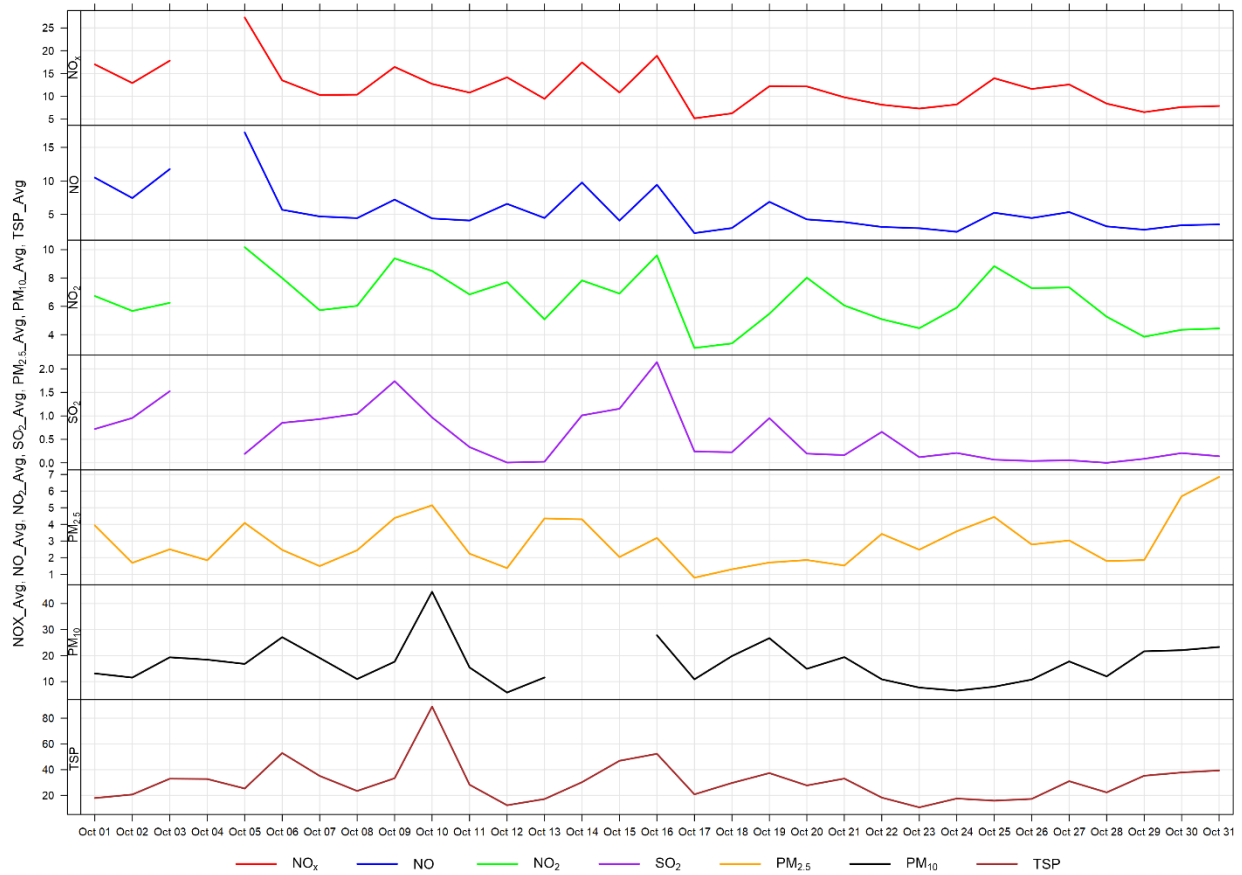


Figure 3-8 24-hour concentrations of NO_x, SO₂, and particulate matter at the Lagoon monitor

Figure 3-9 through Figure 3-11 show the variation in concentrations over various time averaging periods for PM, SO₂ and NO_x. The particulate matter plot in Figure 3-9 typically shows that PM₁₀ and TSP concentrations have a diurnal pattern associated with Lafarge operations, daytime emissions from traffic and other airshed activities. The diurnal patterns also typically follow the diurnal pattern of higher wind speeds during the daytime hours.

Figure 3-10 shows the variation of SO₂ over various time periods. SO₂ concentrations patterns are dependent on the timing of the highest SO₂ concentrations recorded in the month because in general SO₂ concentrations are very low. Figure 3-11 shows the variation of NO_x, NO and NO₂, with the peak of all three pollutants occurring in the early morning. This may be indicative of a peak in traffic.

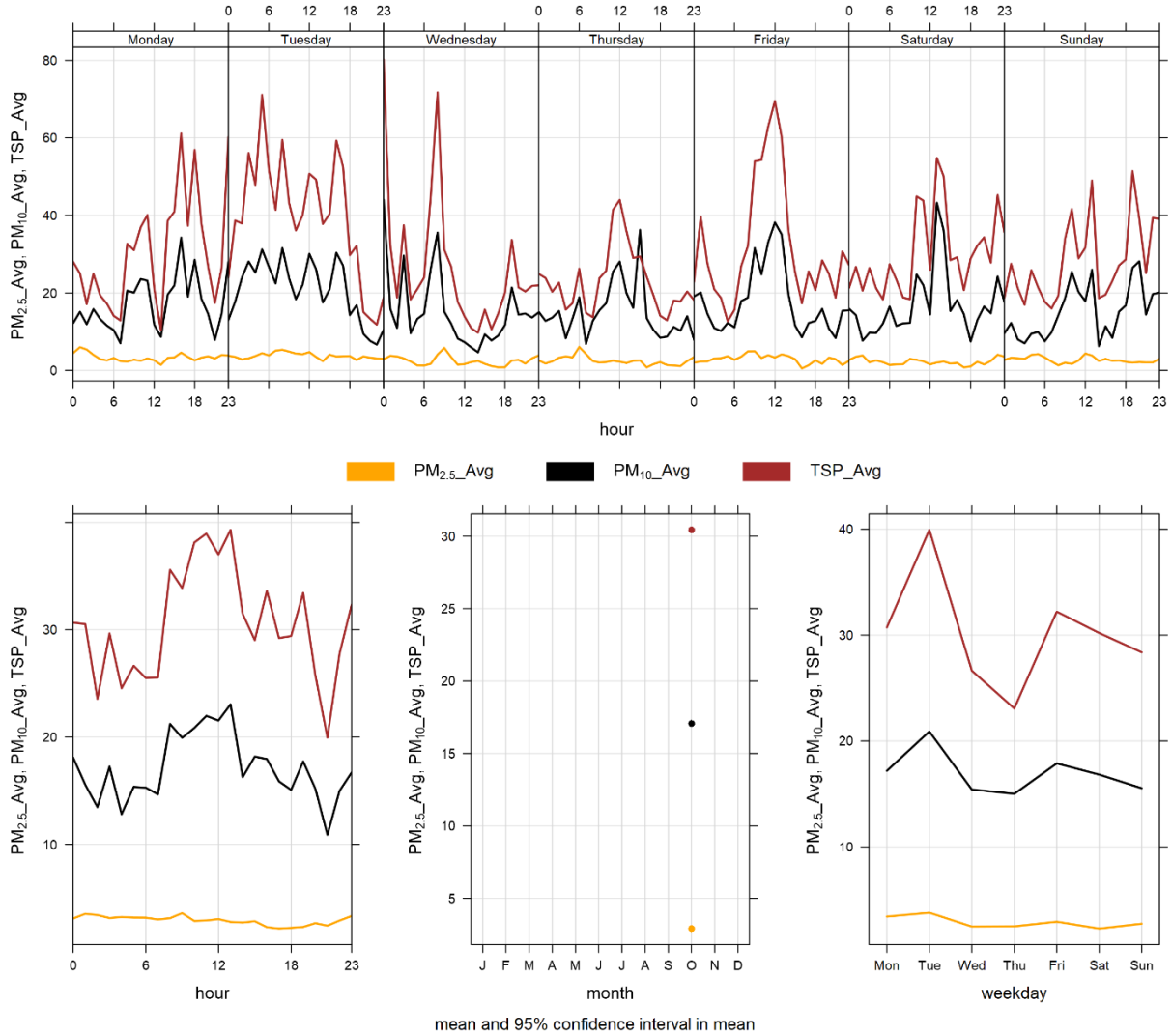


Figure 3-9 Lagoon monitor particulate matter time variation

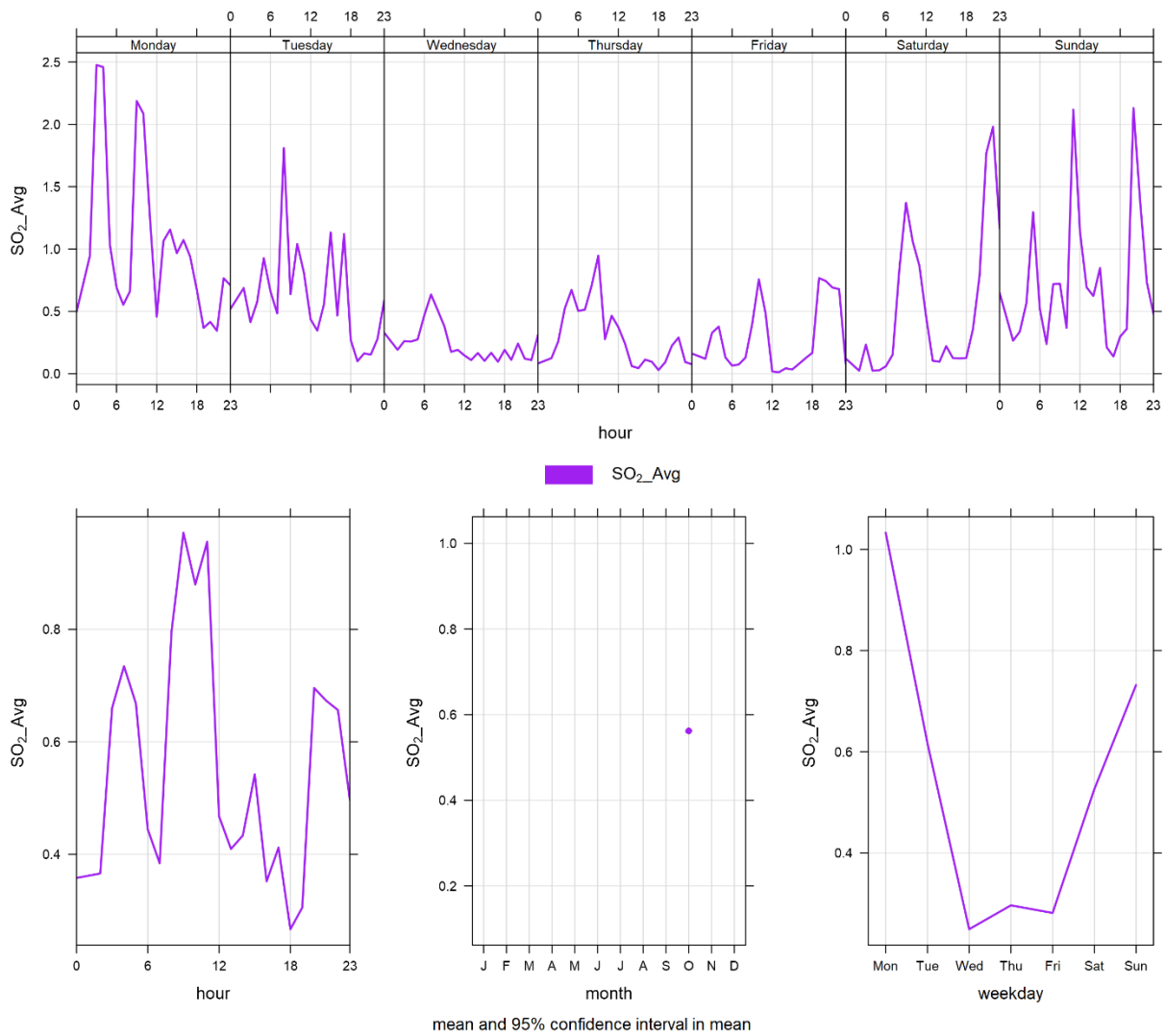


Figure 3-10 Lagoon monitor SO₂ time variation

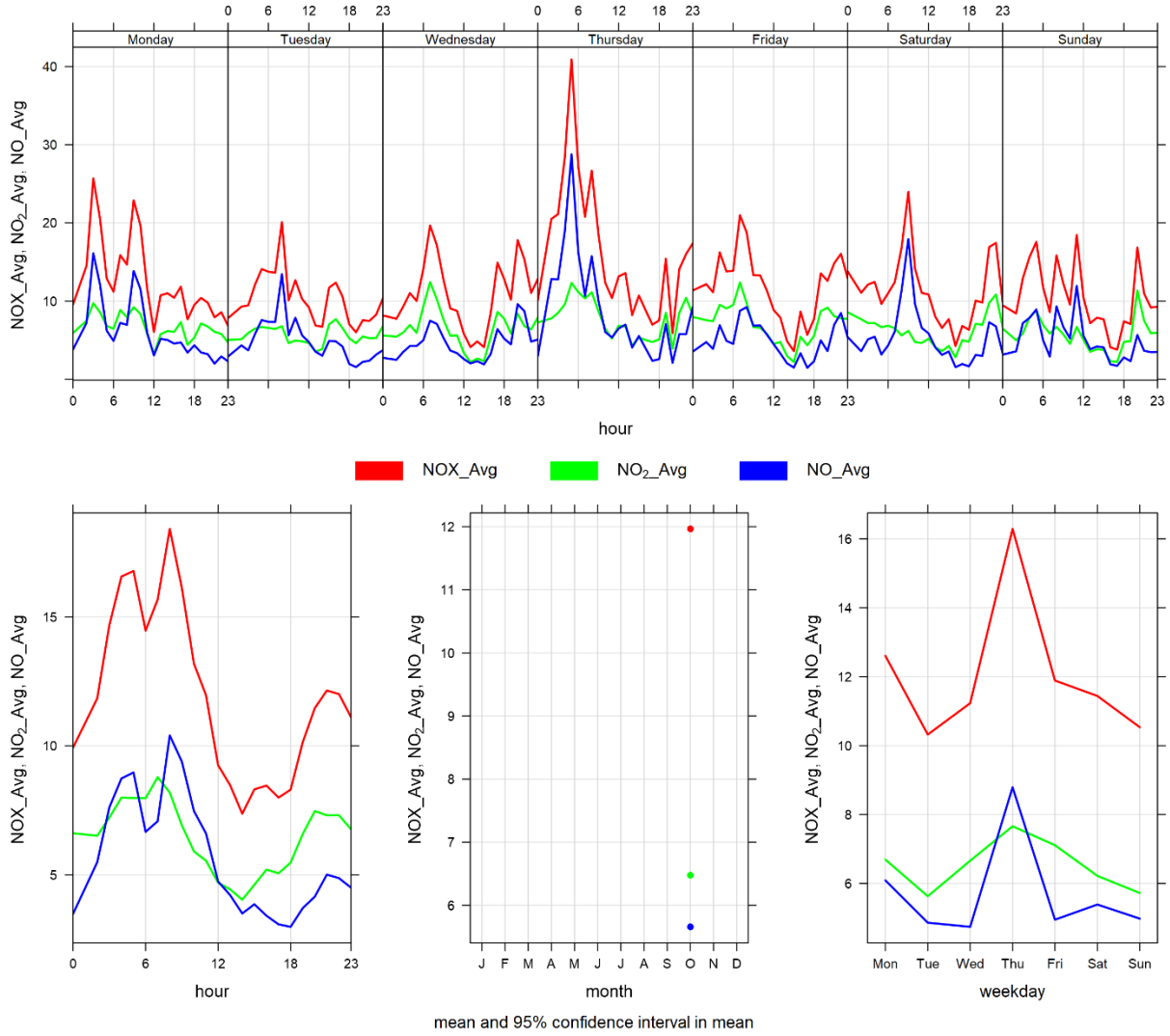


Figure 3-11 Lagoon monitor NO_x time variation

4 WINDRIDGE STATION

The Windridge station contains TSP, PM₁₀, and PM_{2.5} analyzers only. This section provides a summary of the monitoring activities for the Windridge ambient air quality station, including: a table of instrumentation (Table 4-1), a data summary table (Table 4-2), a table of recorded exceedances (Table 4-3), site visit notes, and graphs illustrating the monitoring results for October 2023.

All of the monitors comply with Alberta Environment and Parks Air Monitoring Directive (2016).

4.1 OPERATIONAL SUMMARY

A summary of the station operation for the month is provided in Table 4-1.

Table 4-1 Instrumentation List at the Windridge monitoring location

Parameter Measured	Equipment Description	Notes
PM_{2.5} Concentrations	MetOne BAM-1020 FRM Continuous Particulate Monitor	The PM _{2.5} monitor was calibrated on October 30 th . The monitor recorded 99.9% uptime for the month of October due to one hour of equipment malfunction occurring on October 31 st at 1:00.
PM₁₀ Concentrations	MetOne BAM-1020 Continuous Particulate Monitor	The PM _{2.5} monitor was calibrated on October 30 th . The monitor recorded 99.9% uptime for the month of October.
TSP Concentrations	MetOne BAM-1020 Continuous Particulate Monitor	The TSP monitor was calibrated on October 30 th . The monitor recorded 99.9% uptime for the month of October.

4.2 MONITORING RESULTS AND TRENDS

Table 4-2 summarizes the hourly and daily concentrations recorded in October 2023, and Table 4-3 the recorded exceedances. Figure 4-1 illustrates the time series for hourly PM, Figure 4-2 to Figure 4-4 illustrates the histograms for hourly PM, Figure 4-5 illustrates the time series for daily PM, Figure 4-6 displays the wind rose for the 24-hour TSP and Figure 4-7 illustrates the time series for hourly PM over different time periods.

There were no exceedances of the 24-hour PM_{2.5} AAAQO or the 1-hour PM_{2.5} AAAQG, and 6 exceedances of the 24-hour TSP AAAQO.

Historically in October, the average number of 24-hour TSP AAAQO exceedances and 24-hour PM_{2.5} AAAQO exceedances is 6 and 0, respectively. The maximum number of 24-hour TSP AAAQO exceedances recorded in October were 10 days in 2021.

Due to flood mitigation construction at Exshaw creek the Windridge monitoring station was taken out of operation and removed from the site on April 8th, 2019. The flood mitigation work was completed in August 2020. The Windridge station was reinstalled for September 1st, 2020. As per the photo presented in section 1.1 the flood mitigation work has left an exposed creek bed area immediately west of the Windridge monitor that may contribute

to an increase in TSP levels. Further, the strong wind gusting that occurred in October would have contributed to increased particulate levels that may have arisen from multiple sources: Lafarge Plant, Exshaw Creek, dry sections of the Bow River, and open areas.

Table 4-2 Summary of October 2023 data at the Windridge Station

Parameter	Guideline		Station	Exceedances		Monthly		Maximum 1-hour				Maximum 24-hour		Operational Time (Percent)	
	1-hr	24-hr		1-hr	24-hr	Minimum	Average	Maximum Concentration	Day	Hour	Wind Speed (km/hr)	Wind Direction (degrees)	Maximum Concentration		Day
PM_{2.5} (µg/m ³)	80	29	Windridge	0	0	0.0	1.7	13.0	10	15	17.0	260.8	5.4	31	99.9
PM₁₀ (µg/m ³)	-	-	Windridge	-	-	0.0	36.8	382.0	18	4	52.5	245.5	148.7	18	100.0
TSP (µg/m ³)	-	100	Windridge	-	6	0.0	59.1	670.0	18	4	52.5	245.5	245.5	18	100.0

Table 4-3 Days exceeding the TSP AAAQO or PM_{2.5} AAAQO at the Windridge Station

Date	TSP (ug/m ³)	PM _{2.5} (ug/m ³)	Average Wind Direction (degrees)	Average Wind Speed (km/hr)	Average RH (%)	Root Cause (Provided by Lafarge)
Windridge						
2023-10-03	129.8	-	246.9	16.7	52.5	
2023-10-10	171.6	-	253.6	18.1	39.7	
2023-10-15	102.5	-	251.9	14.9	47.8	
2023-10-17	156.8	-	244.6	28.8	53.8	High wind event
2023-10-18	245.5	-	n/a	n/a	n/a	
2023-10-19	136.9	-	n/a	n/a	n/a	
Total # of Exceedances	6	0				
Maximum # of Exceedances (October)	10 (2021)	0 (2018, 2020, 2021, 2022)				
Average # of Exceedances (October)	6	0				
Minimum # of Exceedances (October)	2 (2020)	0 (2018, 2020, 2021, 2022)				

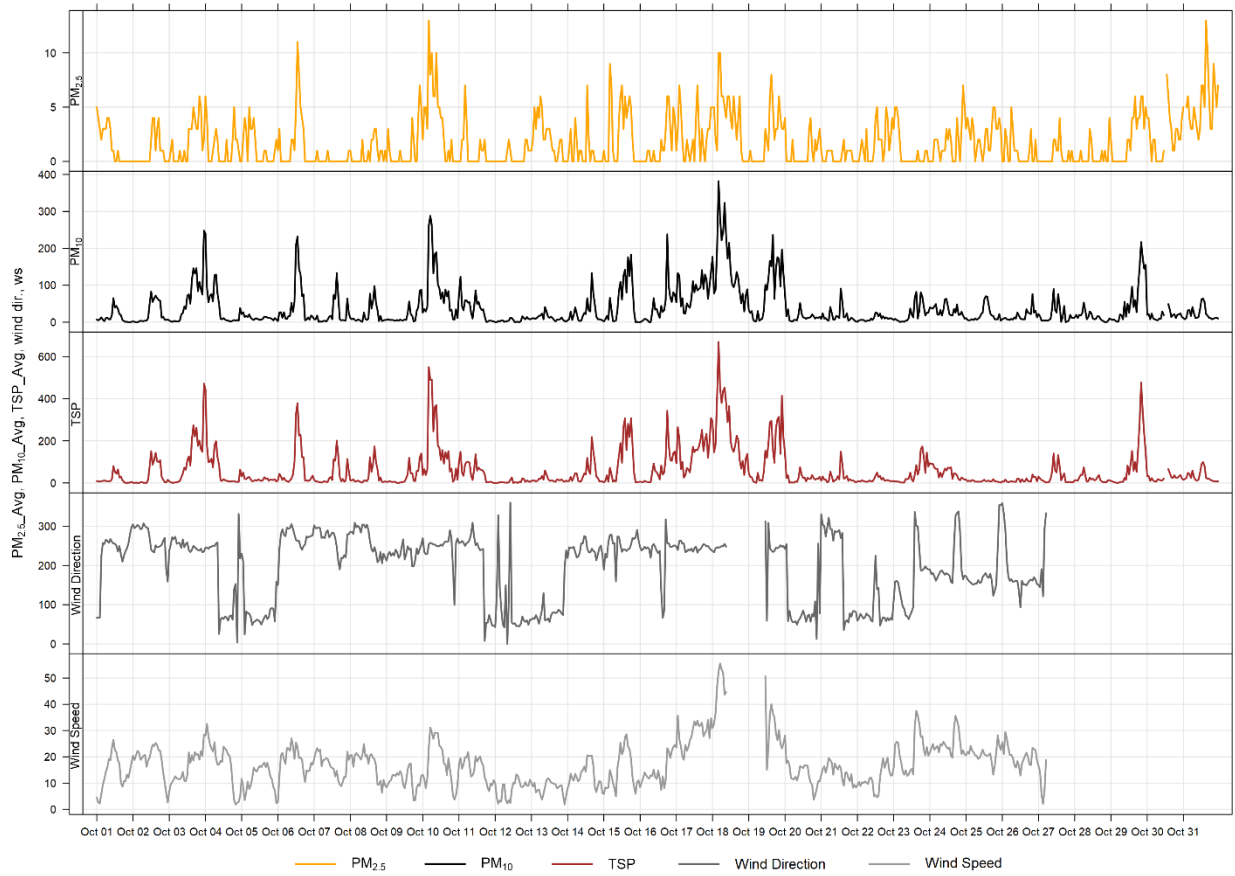


Figure 4-1 1-hour particulate matter concentrations recorded at the Windridge monitor

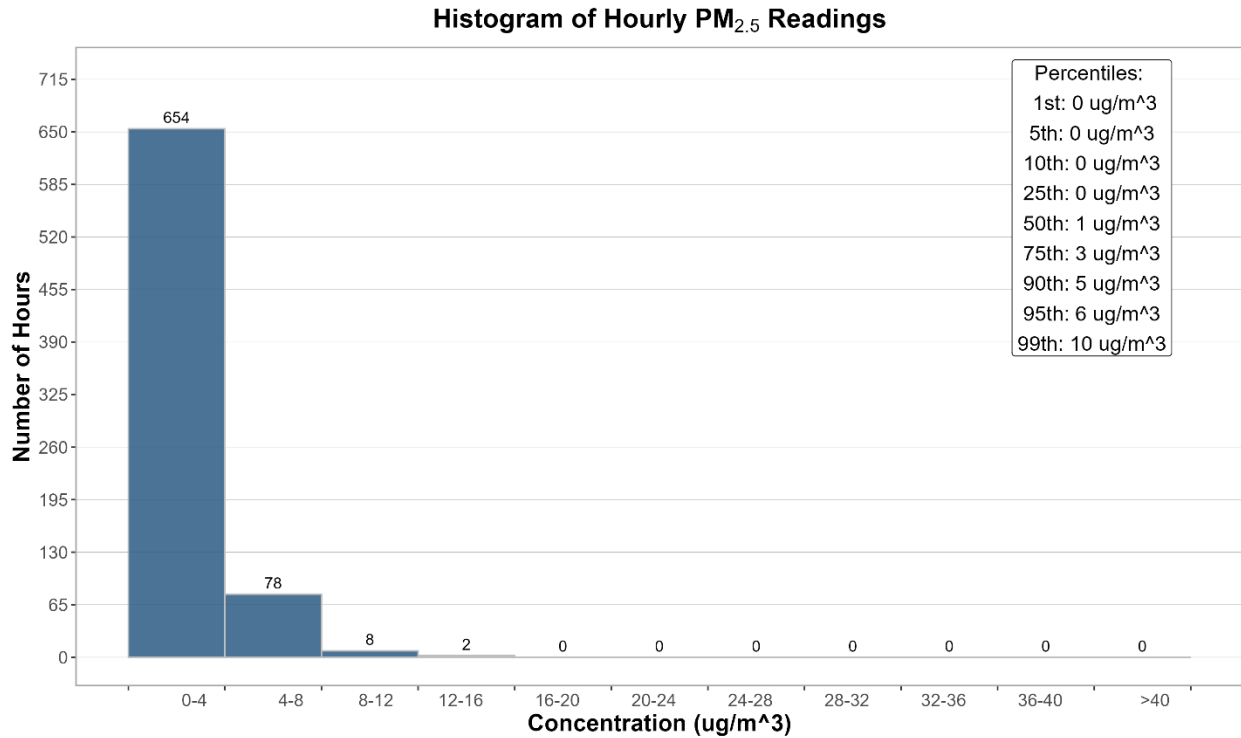


Figure 4-2 Histogram of hourly PM_{2.5} concentrations at the Windridge station

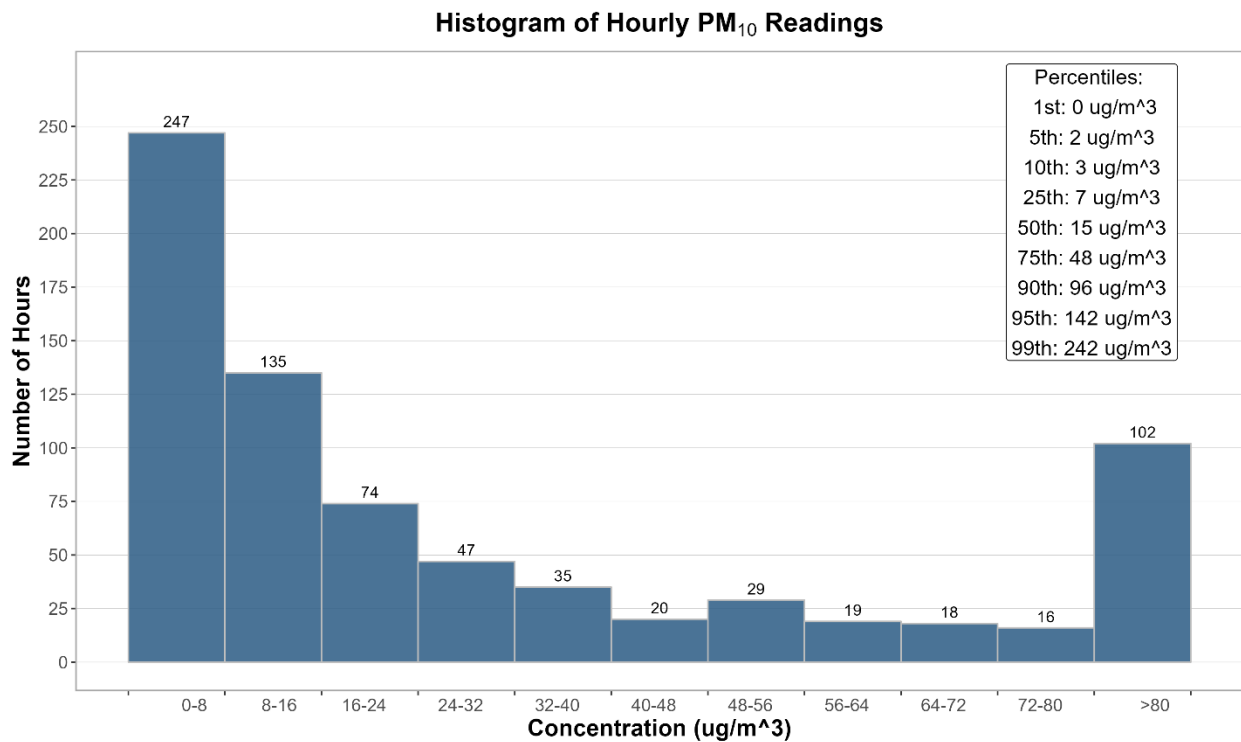


Figure 4-3 Histogram of hourly PM₁₀ concentrations at the Windridge station

Histogram of Hourly TSP Readings

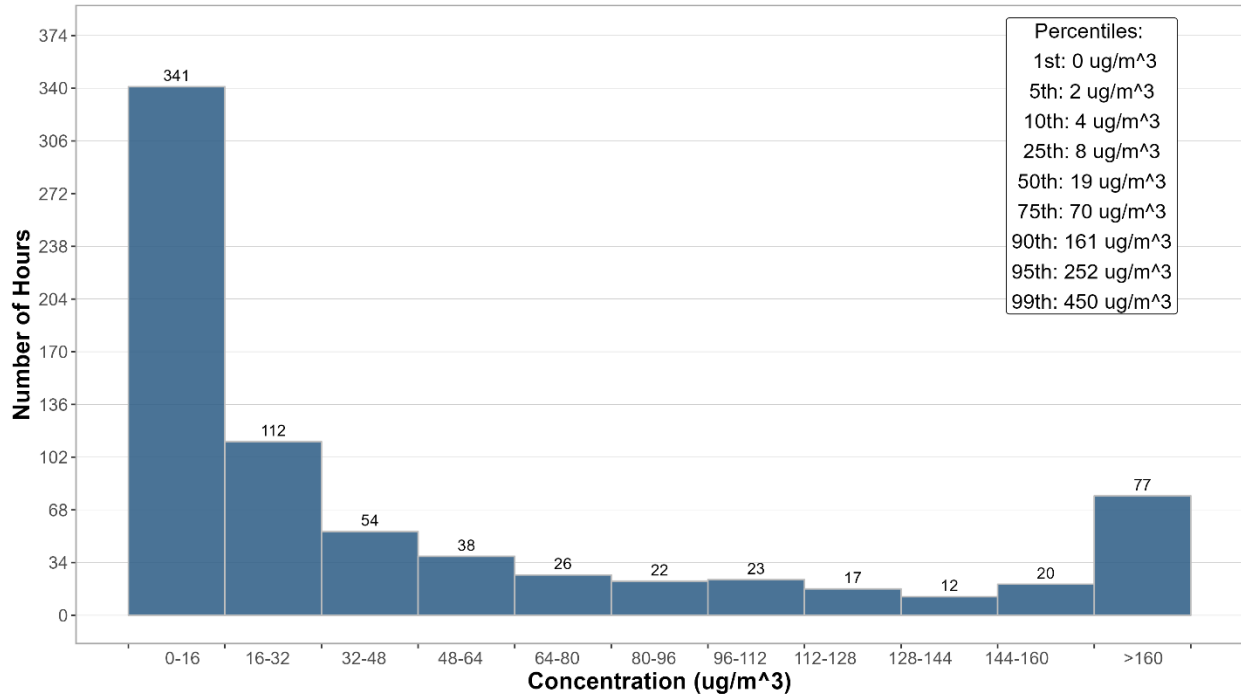


Figure 4-4 Histogram of hourly TSP concentrations at the Windridge station

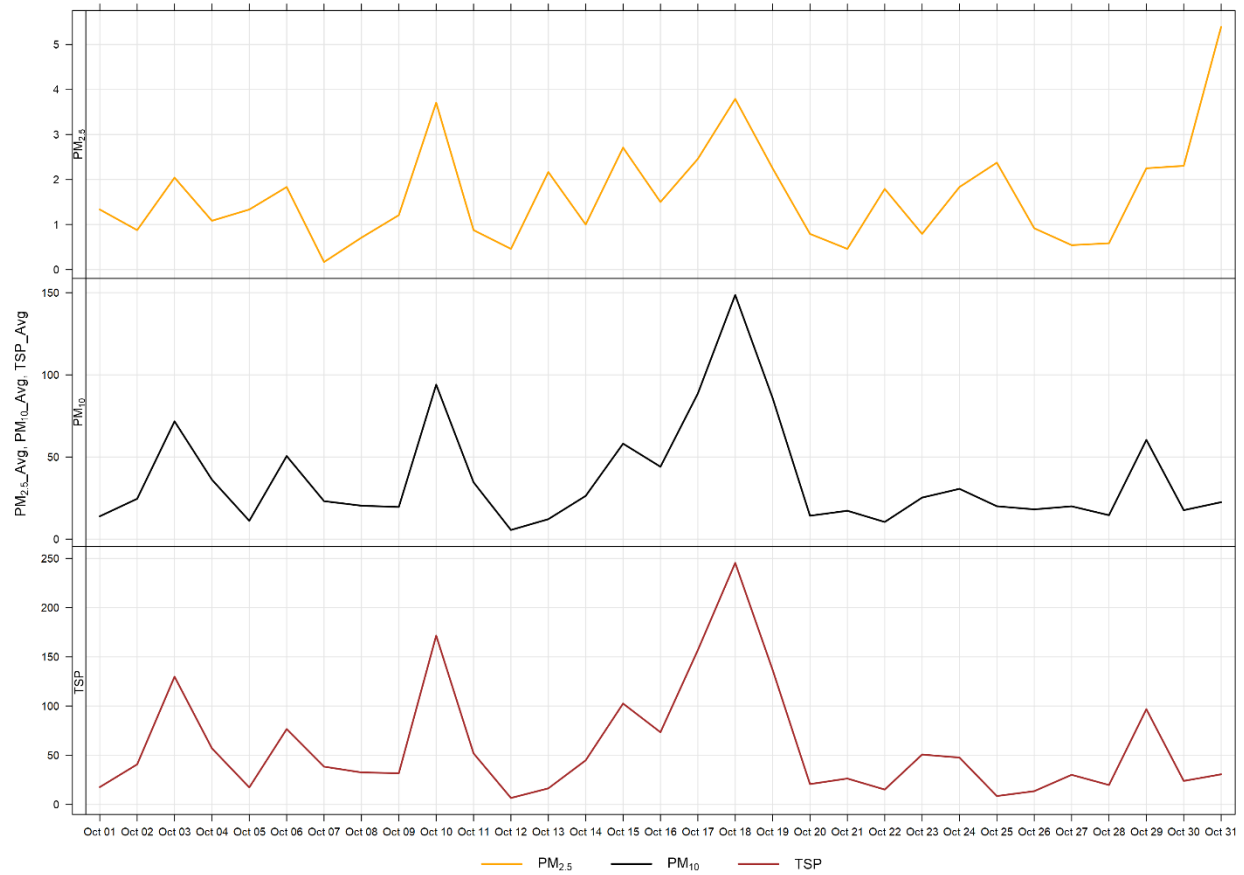


Figure 4-5 24-hour particulate matter concentrations at the Windridge monitor

Figure 4-6 shows the wind rose for the 4 out of 6 days of TSP exceedance in October, as 2 of the exceedance days were excluded due to the maintenance of the meteorological tower. The wind rose shows that the winds predominately came from the west-southwest, suggesting impacts from the direction of the Lafarge Facility.

Figure 4-7 illustrates the hourly PM concentrations recorded at the Windridge monitor, averaged over different time periods. The plot across the top shows the variation of PM over the course of a week, while the bottom three plots show the changes in PM over the course of a day, month and weekday, respectively. Figure 4-7 is based on data collected during October 2023. Similar to the Lagoon station, and similar to the Lagoon station shows a more muted diurnal pattern associated with Lafarge operations, daytime emissions from traffic. The diurnal patterns also follow the diurnal pattern of higher wind speeds during the daytime hours.

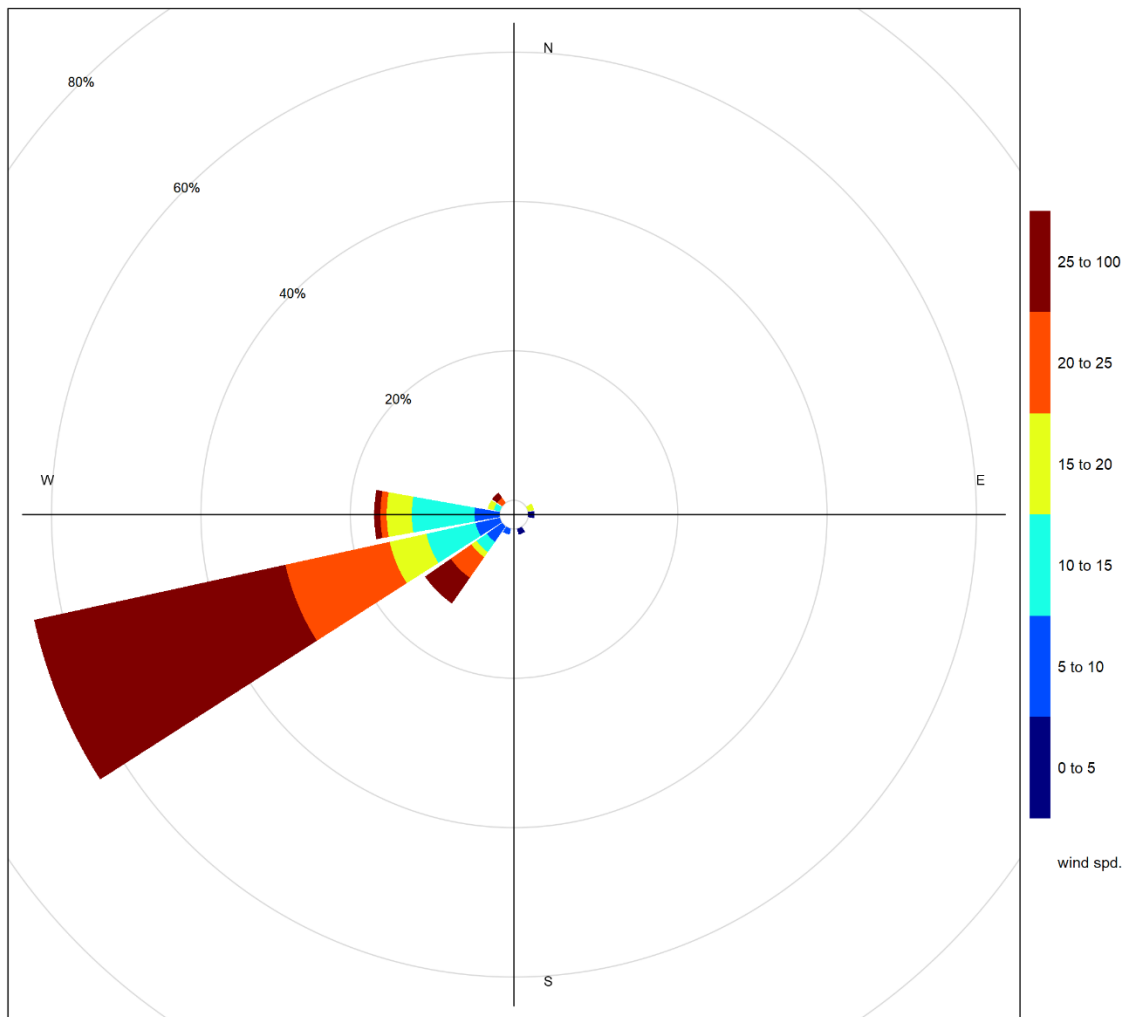


Figure 4-6 Wind rose for TSP exceedance days recorded at the Windridge Station

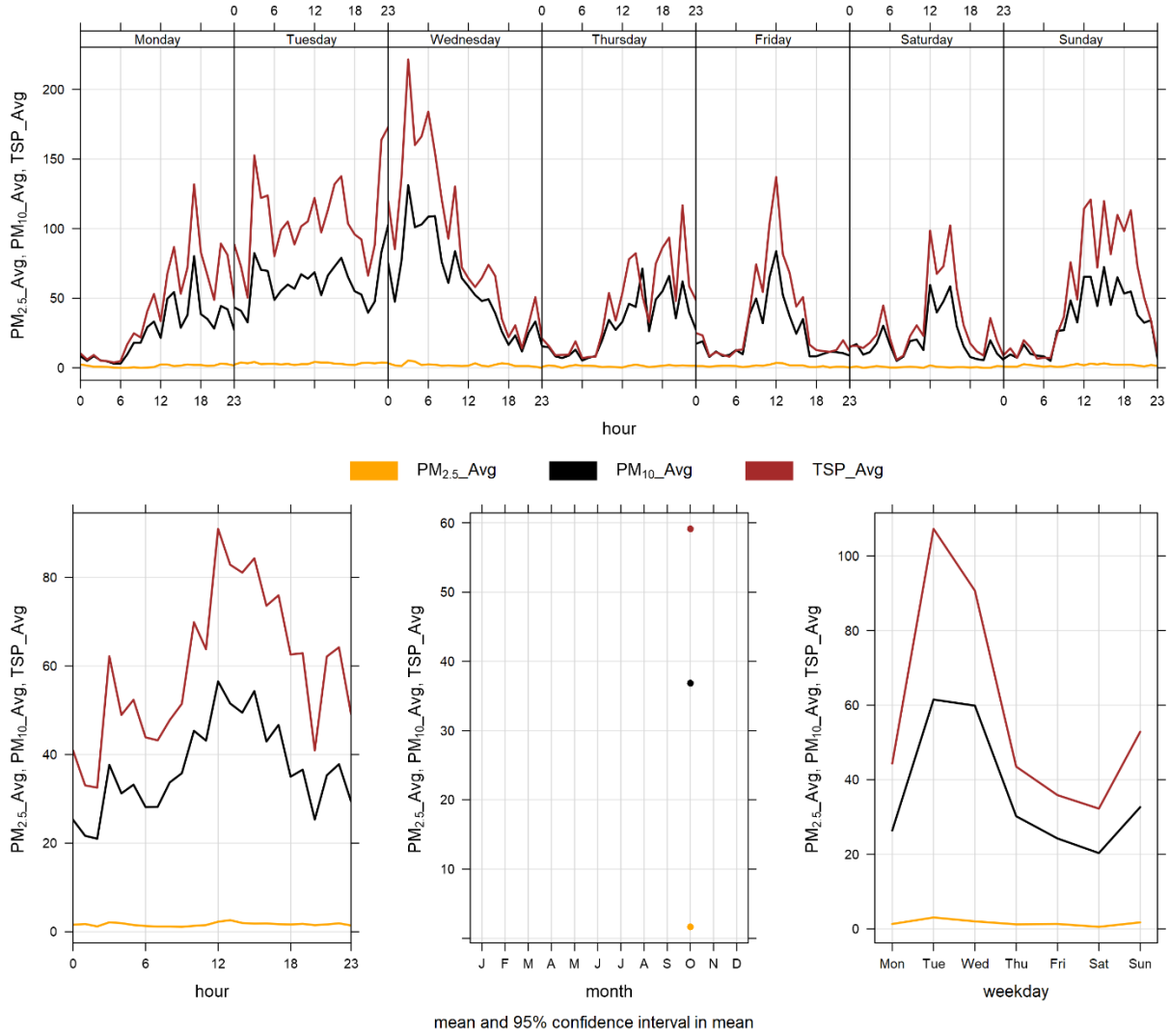


Figure 4-7 Windridge particulate matter time variation

5 WEST INDUSTRIAL GRIMM

5.1 OPERATIONAL SUMMARY

A summary of the station operation for the month is provided in Table 5-1.

Table 5-1 Instrumentation List at the West monitoring location

Parameter Measured	Equipment Description	Notes
PM _{2.5} , PM ₁₀ , TSP Concentrations	GRIMM 365 Continuous Particulate Monitor	The analyzer had 93.5% uptime during the month of October due to 48 hours of equipment malfunction occurring on October 27 th at 15:00 – October 29 th at 14:00.

5.2 MONITORING RESULTS AND TRENDS

The West GRIMM was moved to its current location in order to monitor “background” PM concentrations since the predominant wind pattern is from west to east in the valley. Table 5-2 summarizes the maximum 1-hour and 24-hour concentrations recorded over the course of the month. This is an industrial monitor that is not Alberta Air Monitoring Directive (AMD) compliant and is not required to show compliance with the AAAQO.

Figure 5-1 and Figure 5-2 show the hourly and daily PM_{2.5}, PM₁₀ and TSP concentrations recorded over the month.

There were no exceedances of the 24-hour TSP Guideline (100 µg/m³) AAAQO, the 24-hour PM_{2.5} Guideline (29 µg/m³) or the 1-hour PM_{2.5} Guideline (80 µg/m³) at the station this month.

Historically during the month of October, the West monitor records an average of 0 and 0 exceedance of the 24-hour TSP and PM_{2.5} guidelines. The maximum number of 24-hour TSP AAAQO exceedances recorded in October were 1 day in 2013.

Table 5-2 Summary of October 2023 data at the West GRIMM

Parameter	Guideline		Station	Exceedances		Monthly		Maximum 1-hour					Maximum 24-hour		Operational Time (Percent)
	1-hr	24-hr		1-hr	24-hr	Minimum	Average	Maximum Concentration	Day	Hour	Wind Speed (km/hr)	Wind Direction (degrees)	Maximum Concentration	Day	
PM_{2.5} (µg/m ³)	80	29	West	0	0	0.1	3.6	19.7	25	8	19.2	162.2	9.4	5	93.5
PM₁₀ (µg/m ³)	-	-	West	-	-	0.1	4.4	29.2	4	15	20.8	59.4	13.4	5	93.5
TSP (µg/m ³)	-	100	West	-	0	0.1	4.6	33.8	4	15	20.8	59.4	14.9	5	93.5

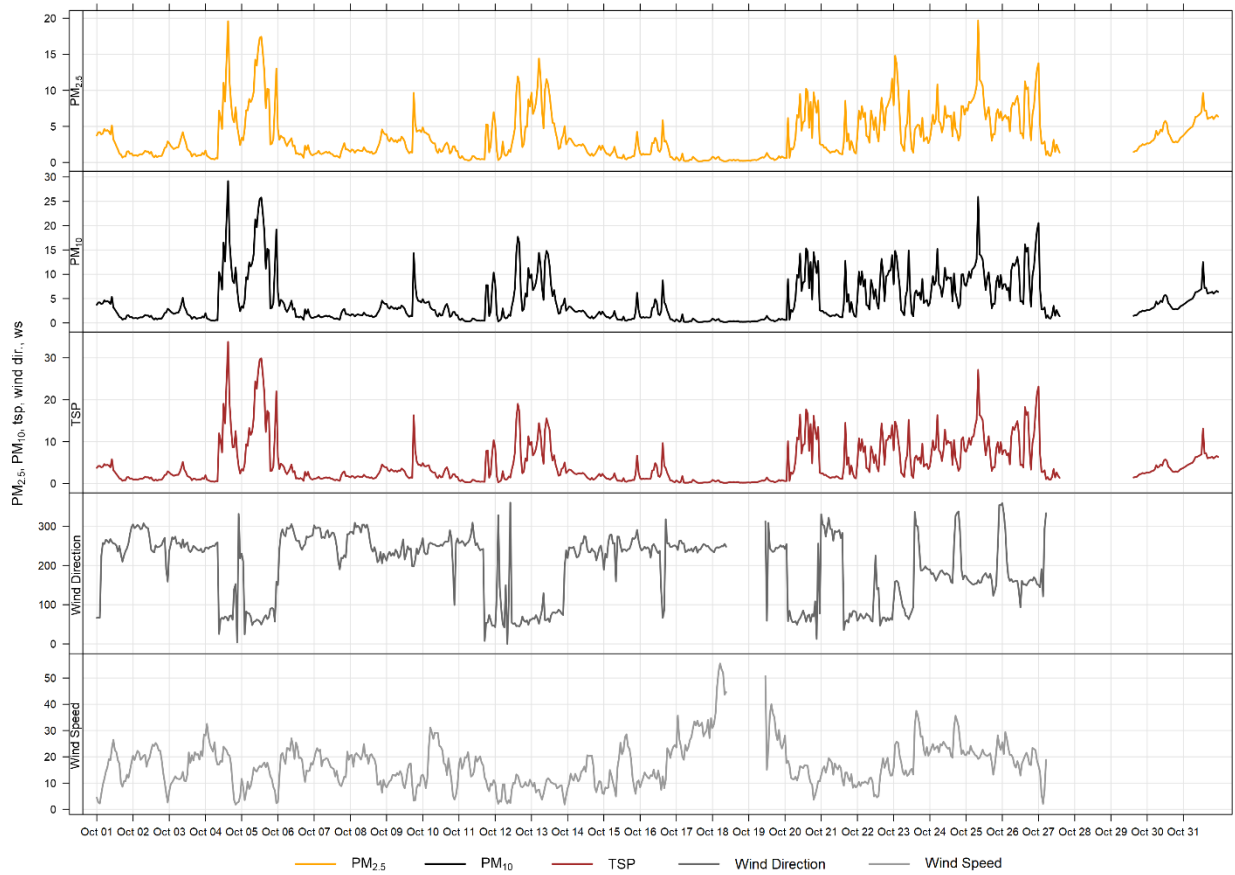


Figure 5-1 1-hour particulate matter concentrations at the West monitor

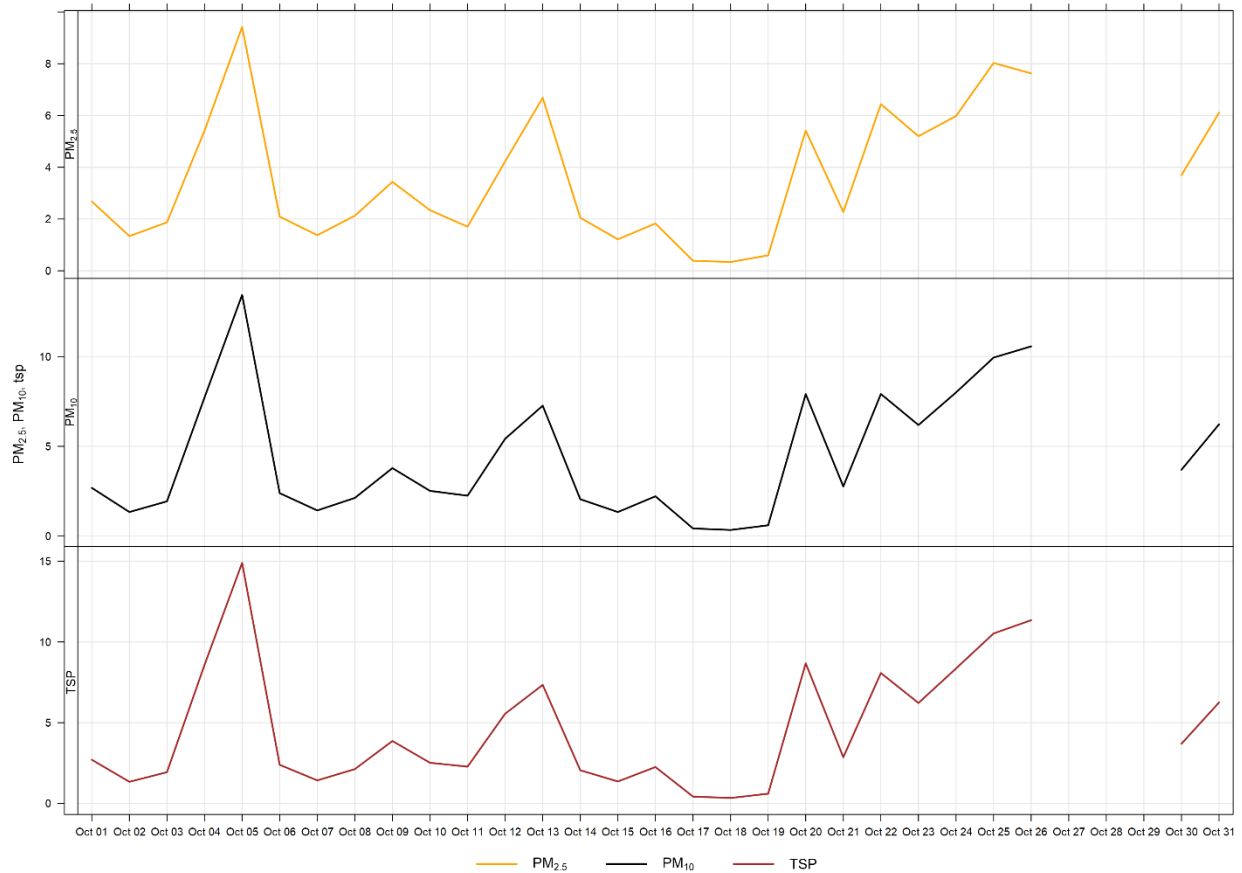


Figure 5-2 24-hour particulate matter concentrations at the West monitor

Figure 5-3 illustrates the hourly PM concentrations recorded at the West monitor, averaged over different time periods. The plot across the top shows the variation of PM over the course of a week, while the bottom three plots show the changes in PM over the course of a day, month and weekday, respectively. Figure 5-3 is based on data collected during October 2023. The diurnal pattern is not significant due to the low PM concentrations recorded in October. Historically this monitor saw daily variations in PM that were more likely a result of higher traffic volume during daylight hours than specific Lafarge operations. The West monitor was moved to its current location (Figure 1-1) on December 1st, 2021, and will continue to be evaluated to better understand influences from background sources, Lafarge Exshaw, as well as highway and rail sources.

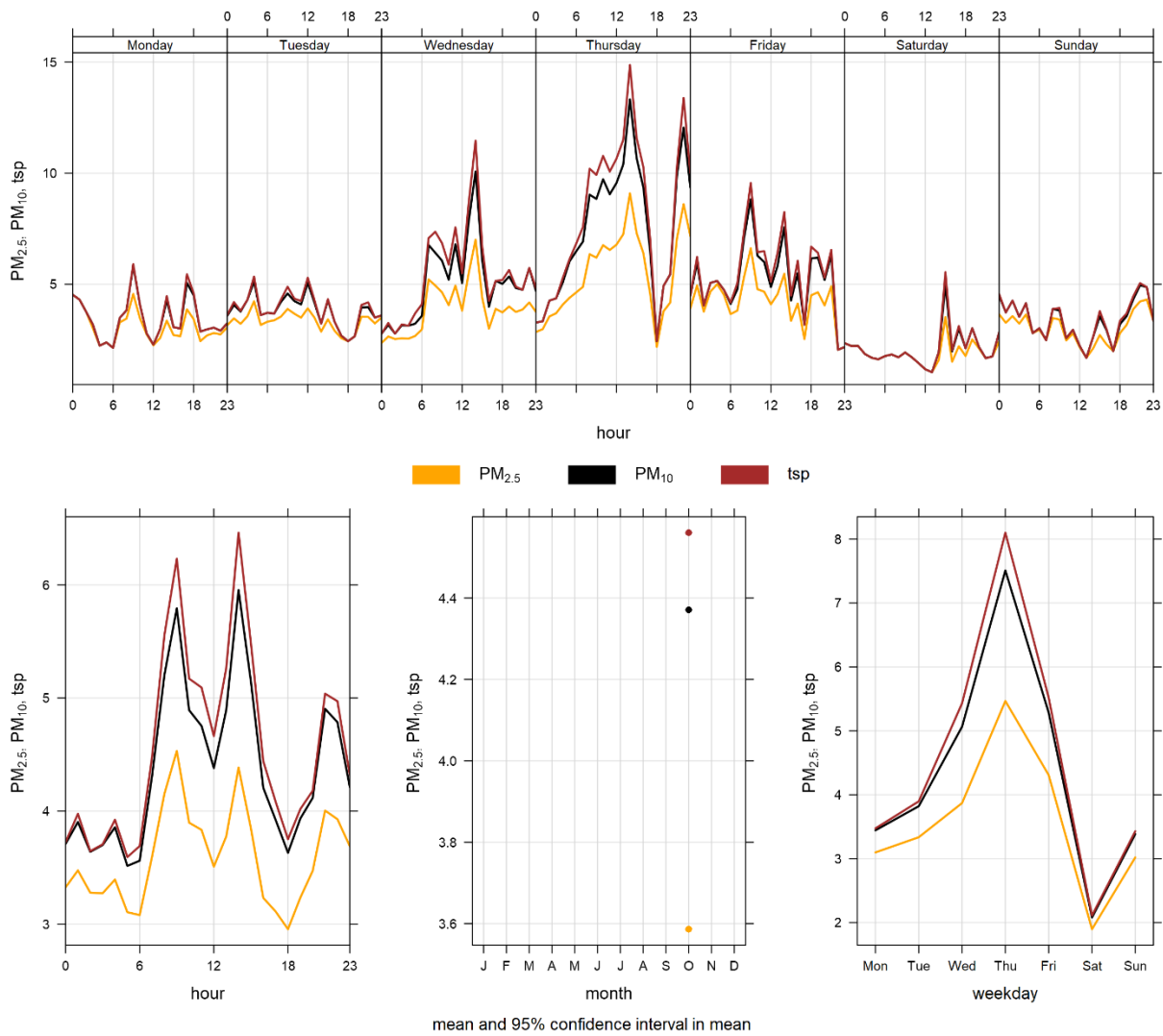


Figure 5-3 West monitor particulate matter time variation

6 BERM INDUSTRIAL GRIMM

6.1 OPERATIONAL SUMMARY

A summary of the station operation for the month is provided in Table 6-1.

Table 6-1 Instrumentation List at the Berm monitoring location

Parameter Measured	Equipment Description	Notes
PM _{2.5} , PM ₁₀ , TSP Concentrations	GRIMM 365 Continuous Particulate Monitor	The analyzer had 93.7% uptime during the month of October due to 47 hours of equipment malfunction occurring on October 27 th at 15:00 – October 29 th at 12:00, and October 31 st at 13:00.

6.2 MONITORING RESULTS AND TRENDS

The Berm monitor was placed at its current location as a result of the dispersion modelling conducted for the facility. Figure 6-1 and Figure 6-2 show the hourly and daily PM_{2.5}, PM₁₀, and TSP concentrations recorded over the month. Table 6-2 summarizes the maximum 1-hour and 24-hour PM concentrations recorded during the month, and Table 6-3 summarizes the recorded exceedances. This is an industrial monitor that is not Alberta Air Monitoring Directive (AMD) compliant and is not required to show compliance with the AAAQO.

There were 8 and 0 exceedances of the 24-hour TSP (100 µg/m³) and PM_{2.5} (29 µg/m³) Guidelines, respectively. There was 1 hour exceeding the 1-hour PM_{2.5} Guideline.

Historically during the month of October, the Berm monitor records an average of 13 and 0 exceedances of the 24-hour TSP and PM_{2.5} guidelines, respectively. The maximum number of TSP exceedances recorded during October occurred in 2014 where there were 21 days that exceeded the guideline. The maximum number of PM_{2.5} exceedances in October was 2 days in 2022.

It should also be noted that the GRIMM monitors become more conservative in the reported PM concentrations as the size fraction increases. The PM_{2.5} size fraction has been shown to match other regulatory approved PM_{2.5} monitors, but the TSP concentrations recorded by the GRIMM tend to be higher than regulatory approved monitors (Levelton, 2015).

The Berm monitor is located along a ridge at the edge of the Lafarge property and is in an area where on-site trucks drive through site, which can create fugitive dust. Quarry blasting also has the potential to impact short term PM immediately following a blast. The strong wind gusting that occurred in October would have also contributed to increased particulate levels that may have arisen from multiple sources: Lafarge Plant, Exshaw Creek, dry sections of the Bow River, and open areas.

Table 6-2 Summary of October 2023 data at the Berm GRIMM

Parameter	Guideline		Station	Exceedances		Monthly		Maximum 1-hour				Maximum 24-hour		Operational Time (Percent)	
	1-hr	24-hr		1-hr	24-hr	Minimum	Average	Maximum Concentration	Day	Hour	Wind Speed (km/hr)	Wind Direction (degrees)	Maximum Concentration		Day
PM_{2.5} (µg/m ³)	80	29	Berm	1	0	0.1	6.7	84.0	18	11	-	-	26.2	18	93.7
PM₁₀ (µg/m ³)	-	-	Berm	-	-	0.1	40.7	711.7	18	11	-	-	209.1	18	93.7
TSP (µg/m ³)	-	100	Berm	-	8	0.1	116.5	2254.2	18	11	-	-	797.5	18	93.7

Table 6-3 Days exceeding the Guideline for TSP or PM_{2.5} at the Berm Monitor

Date	TSP (ug/m ³)	PM _{2.5} (ug/m ³)	Average Wind Direction (degrees)	Average Wind Speed (km/hr)	Average RH (%)	Root Cause (Provided by Lafarge)
Berm						
2023-10-03	292.4	-	246.9	16.7	52.5	
2023-10-06	132.9	-	276.5	19.2	45.6	
2023-10-10	375.0	-	253.6	18.1	39.7	
2023-10-14	105.4	-	241.3	12.9	62.0	
2023-10-15	212.2	-	251.9	14.9	47.8	
2023-10-17	309.5	-	244.6	28.8	53.8	High wind event
2023-10-18	797.5	-	n/a	n/a	n/a	
2023-10-19	309.5	-	n/a	n/a	n/a	
Total # of Exceedances	8	0				
Maximum # of Exceedances (October)	21 (2014)	2 (2022)				
Average # of Exceedances (October)	13	0				
Minimum # of Exceedances (October)	3 (2021)	0 (2010, 2011, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021)				

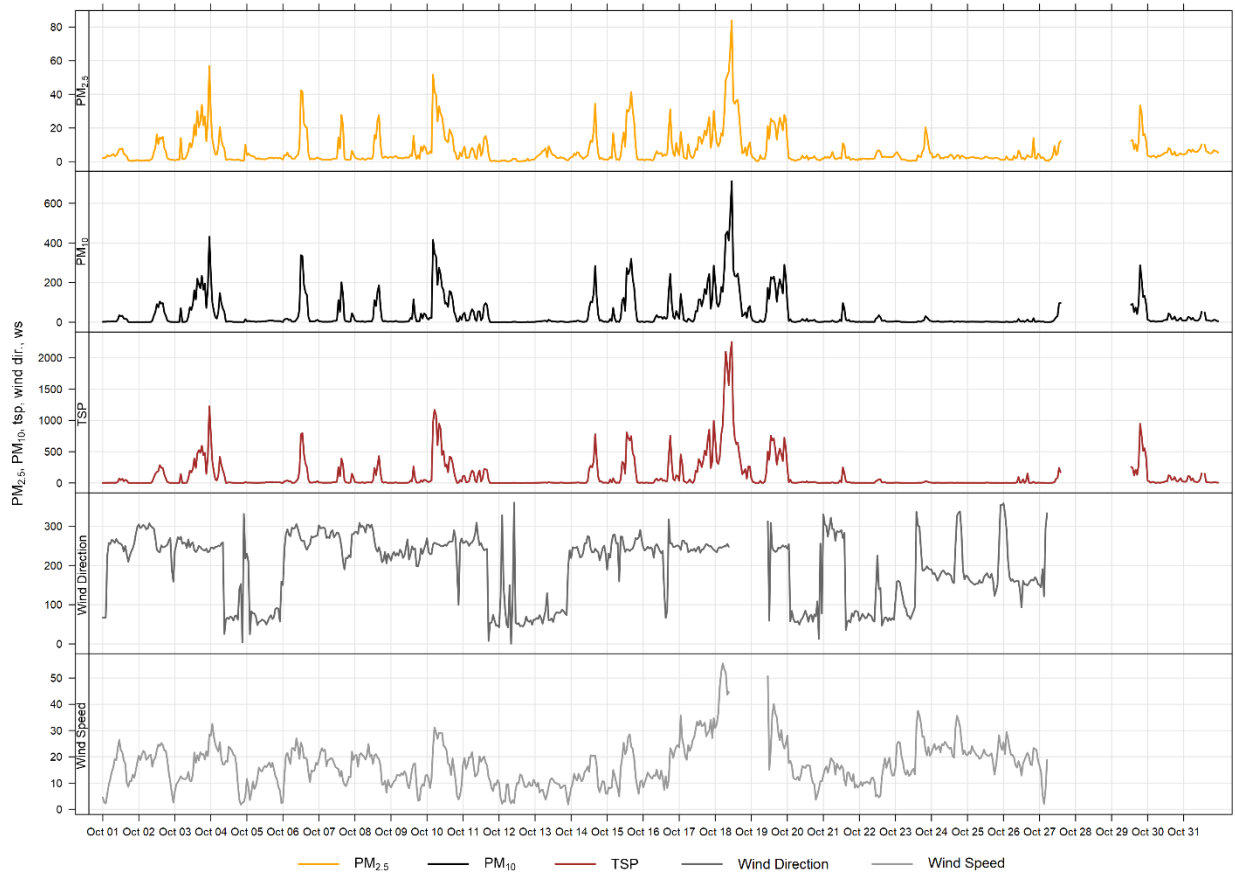


Figure 6-1 1-hour particulate matter concentrations recorded at the Berm monitor

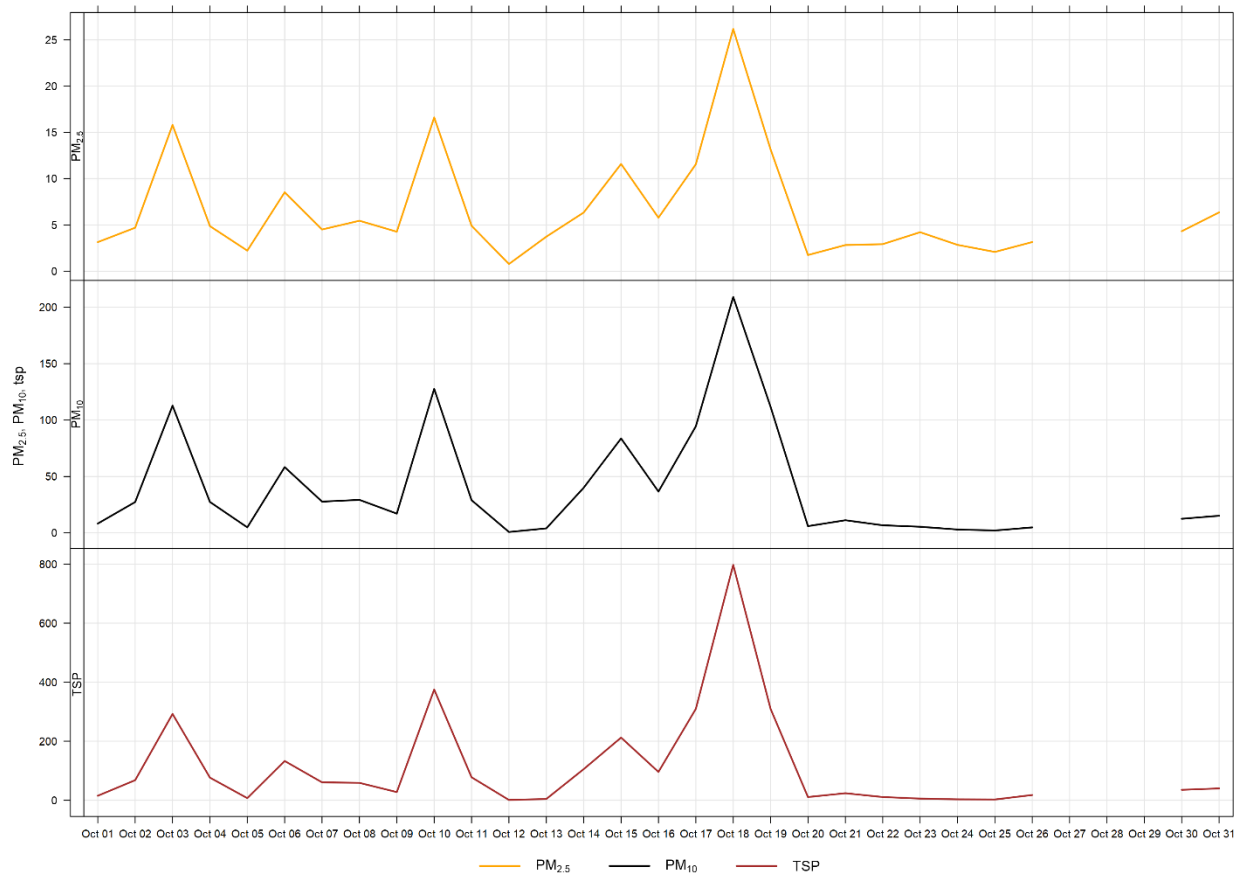


Figure 6-2 24-hour particulate matter concentrations recorded at the Berm monitor

Figure 6-3 shows the wind rose for the 6 out of 8 days of TSP exceedance in October, as 2 of the exceedance days were excluded due to the maintenance of meteorological tower. The wind roses show that the wind predominately came from the west-southwest direction. This month some of the TSP exceedances were driven by windblown fugitive dust, and winds from the west which suggest impacts from the Lafarge Facility.

Figure 6-4 shows the variation of PM recorded at the Berm monitor over various time averaging periods. The Berm monitor diurnal pattern, similar to the Lagoon station, and is associated with Lafarge operations, but also daytime emissions from other activities and sources in Exshaw.

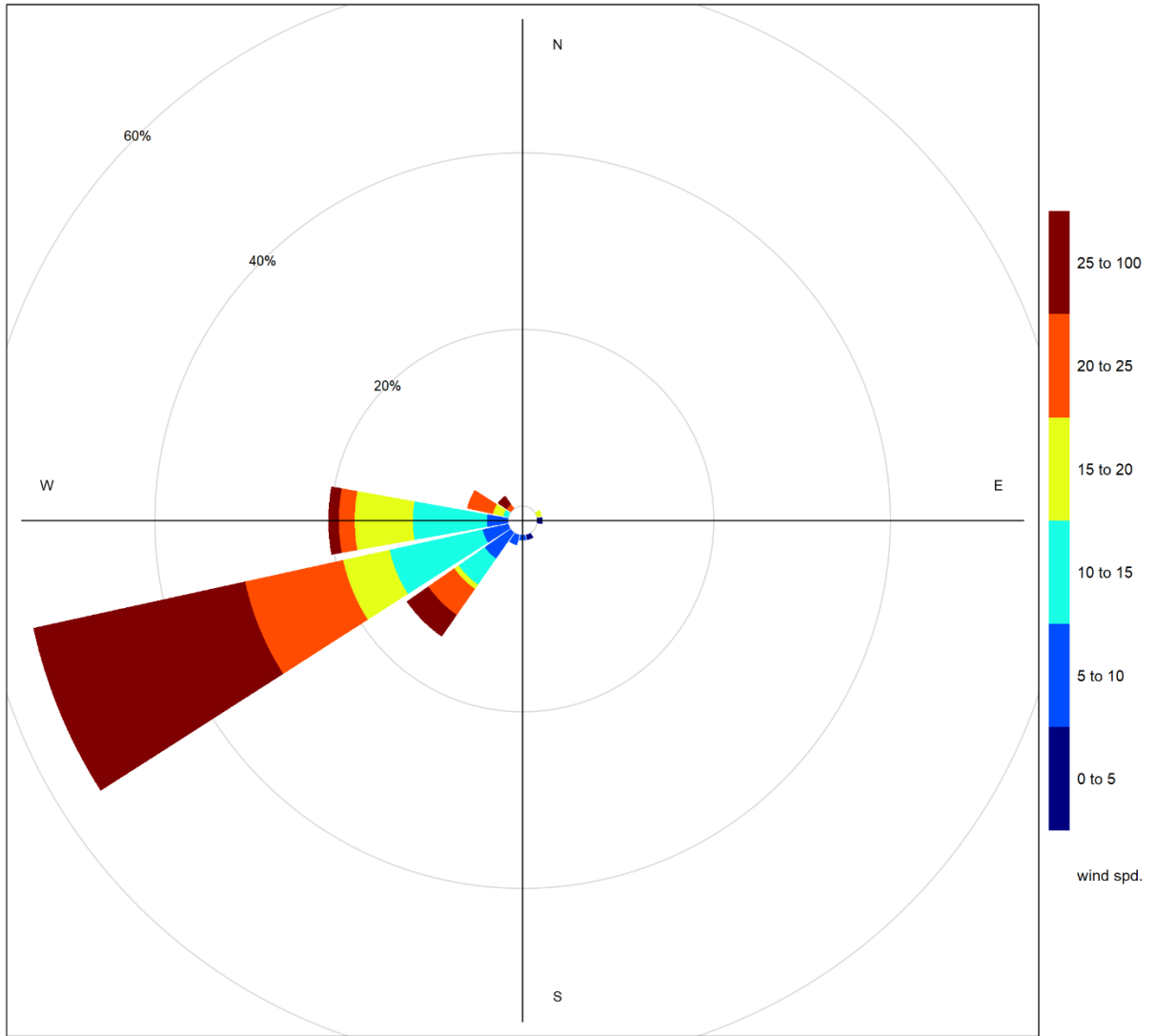


Figure 6-3 Windrose for TSP exceedance days recorded at the Berm GRIMM

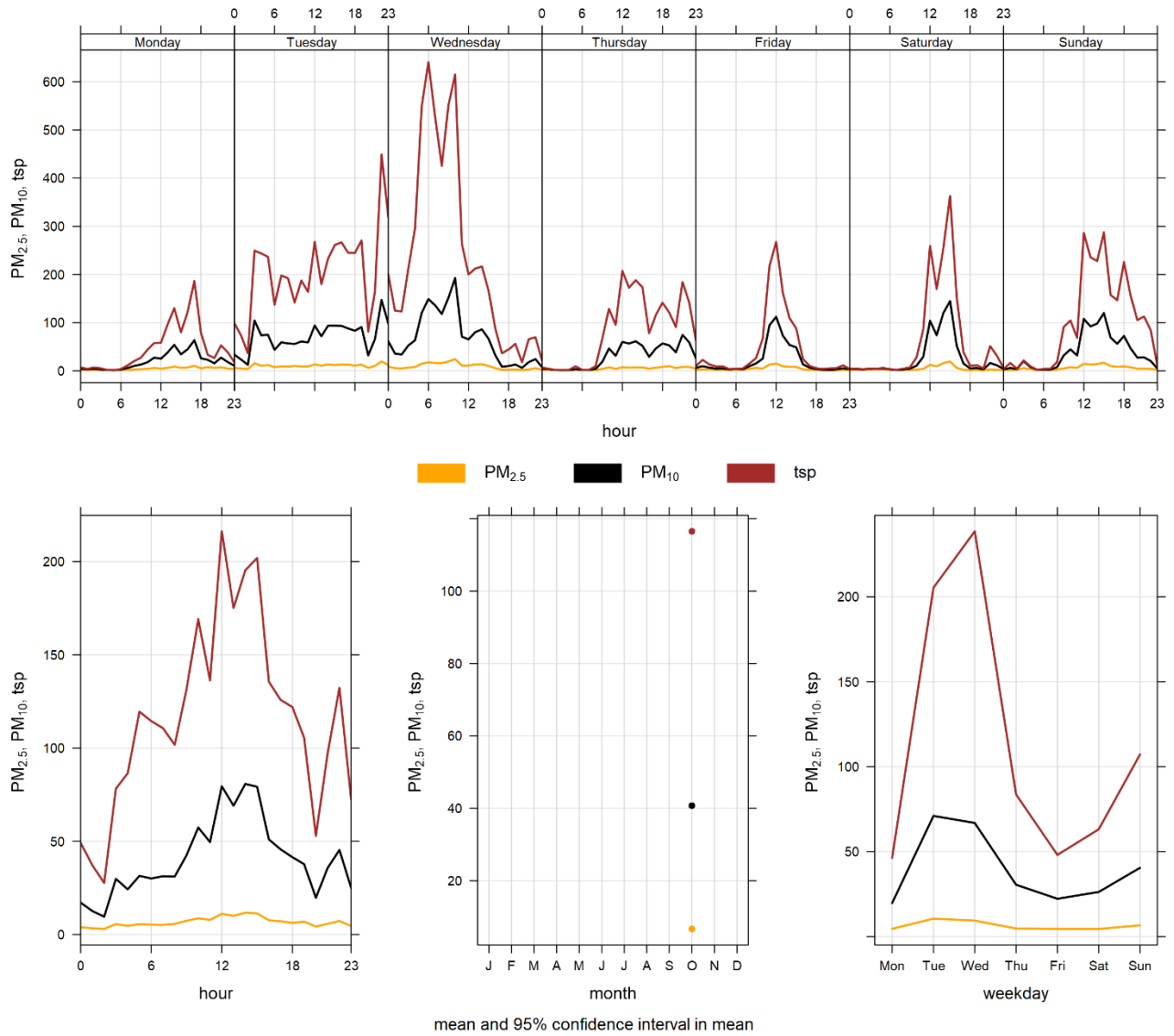


Figure 6-4 Berm particulate matter time variation

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APPENDIX

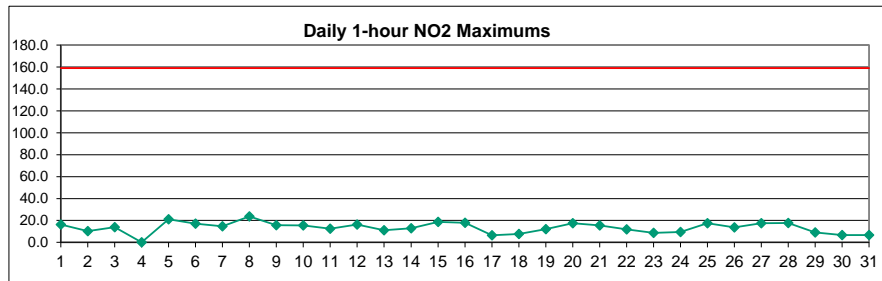
A DATA & CALIBRATION REPORTS

APPENDIX



Lagoon NO₂ (ppb) – October 2023

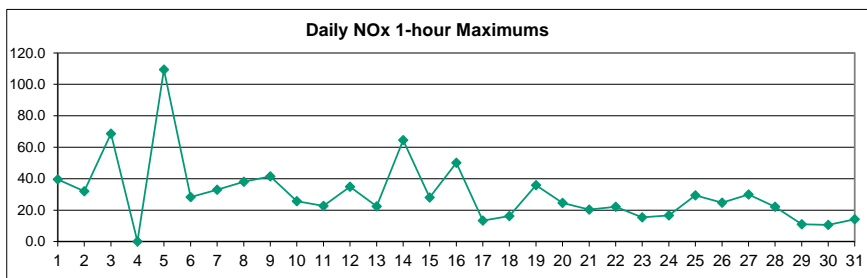
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	6.7	S	10.0	13.8	15.8	16.2	14.0	9.3	9.9	6.3	4.3	6.7	3.4	2.1	5.8	4.2	1.4	1.8	3.2	3.7	4.4	4.8	4.1	2.8	6.7	16.2
2	4.4	S	2.2	2.9	3.6	3.5	3.0	6.8	6.2	8.0	10.3	3.2	1.3	1.6	5.6	3.8	9.1	8.9	5.4	8.3	10.2	9.5	6.8	5.9	5.7	10.3
3	5.3	S	5.7	5.2	7.3	11.7	11.9	11.9	14.0	8.8	10.2	7.8	1.8	1.5	3.0	7.0	8.6	2.3	1.5	1.5	2.5	3.4	1.5	9.3	6.2	14.0
4	4.0	S	5.4	5.6	4.4	3.8	13.4	14.4	11.5	5.8	C	C	C	C	C	C	8.3	4.6	5.9	8.7	8.0	8.7	15.2	-	-	
5	16.0	S	13.7	15.3	15.3	19.1	16.3	12.0	14.8	7.5	2.2	5.0	6.8	7.7	2.6	1.9	9.0	7.5	4.1	2.7	2.4	11.9	21.1	19.1	10.2	21.1
6	16.5	S	8.1	8.9	10.1	5.5	5.0	4.7	4.7	7.7	10.2	10.7	6.7	6.0	3.7	1.5	4.1	5.5	7.0	17.0	14.4	11.9	9.9	4.2	8.0	17.0
7	4.4	S	5.3	3.7	3.6	3.8	4.7	5.2	3.7	4.3	3.6	3.2	7.4	6.5	5.8	2.3	1.0	2.1	6.0	11.1	8.9	13.0	14.6	7.9	5.7	14.6
8	8.1	S	4.0	3.2	3.2	4.3	3.1	3.1	2.7	2.9	2.4	10.8	6.9	2.3	0.7	4.5	2.8	1.4	3.6	9.6	23.8	13.6	9.4	12.4	6.0	23.8
9	9.4	S	11.8	15.7	14.3	12.1	12.6	10.8	8.0	12.0	10.1	11.0	1.8	4.0	1.4	1.6	1.6	1.7	10.9	14.7	14.7	11.9	13.3	10.5	9.4	15.7
10	13.8	S	6.0	9.7	5.1	10.3	9.5	8.7	8.8	3.3	6.8	5.0	6.0	5.8	8.3	15.4	14.9	14.1	6.5	6.4	7.1	6.1	9.8	7.9	8.5	15.4
11	4.3	S	4.5	5.1	7.3	4.4	10.1	12.1	8.1	12.6	8.9	9.4	5.0	1.6	1.9	2.8	11.1	11.9	3.5	6.1	10.3	8.4	4.5	3.7	6.8	12.6
12	3.9	S	2.3	2.9	7.1	7.5	9.4	10.0	8.5	10.9	11.3	8.2	5.4	5.3	5.8	8.7	5.4	6.7	9.2	16.2	7.2	12.7	8.8	4.0	7.7	16.2
13	4.4	S	4.1	6.3	7.6	7.1	5.6	9.8	7.7	4.8	4.1	5.4	5.4	2.9	2.3	2.1	2.5	2.3	2.5	3.4	6.2	4.1	5.3	11.0	5.1	11.0
14	11.3	S	10.0	10.3	11.1	10.1	10.1	9.6	10.3	11.9	7.7	7.8	3.5	1.1	1.0	2.4	3.0	7.2	4.1	7.5	12.9	10.1	9.9	7.3	7.8	12.9
15	6.9	S	5.6	3.7	8.8	15.2	10.6	10.3	8.3	9.9	4.2	1.6	1.5	1.6	0.6	2.7	2.0	2.5	9.1	6.8	18.7	10.5	8.2	9.2	6.9	18.7
16	8.0	S	12.6	17.8	17.8	11.6	9.6	13.9	11.5	15.0	9.5	5.5	4.9	12.8	13.8	16.3	16.8	4.1	4.4	4.6	2.6	3.2	2.5	2.0	9.6	17.8
17	0.7	S	5.7	6.3	3.8	1.0	1.8	3.0	3.5	2.9	1.2	3.3	6.5	1.3	0.8	3.1	3.8	3.1	4.7	2.4	4.3	3.2	1.6	2.4	3.1	6.5
18	1.7	S	1.6	1.4	1.6	2.7	1.9	5.7	4.0	2.5	2.4	2.7	2.7	2.0	2.7	1.2	1.1	2.7	7.6	5.5	6.7	5.4	6.0	6.1	3.4	7.6
19	4.6	S	6.4	6.9	8.5	9.0	9.9	11.8	12.2	8.8	5.9	6.2	5.2	2.4	1.4	0.6	0.5	1.5	2.0	3.0	3.6	4.8	5.8	5.0	5.5	12.2
20	6.0	S	1.8	5.3	11.2	10.9	13.5	17.6	13.5	4.6	5.0	2.8	1.9	7.8	4.5	3.1	11.1	6.2	9.1	9.2	8.6	10.4	9.0	11.6	8.0	17.6
21	15.6	S	12.2	11.1	9.8	9.6	8.4	7.1	4.7	5.5	4.7	4.2	6.4	4.3	3.7	7.0	3.2	6.6	4.1	3.6	2.8	2.4	1.1	1.5	6.1	15.6
22	1.5	S	1.2	3.1	7.6	2.8	2.1	2.5	8.0	6.5	7.8	11.8	10.6	8.0	10.2	5.7	1.5	3.0	3.9	2.7	6.2	5.0	3.3	2.2	5.1	11.8
23	3.2	S	7.7	7.4	3.1	2.7	2.8	6.1	8.6	7.2	7.3	5.5	4.0	6.4	5.3	4.2	5.2	2.7	2.2	2.5	2.3	2.0	1.9	2.1	4.5	8.6
24	1.9	S	4.4	5.4	9.4	5.7	5.1	3.4	3.0	3.7	2.4	3.3	3.9	5.2	4.1	5.6	6.9	8.2	8.8	8.8	9.1	9.3	8.6	9.4	5.9	9.4
25	12.4	S	10.2	11.8	14.5	12.9	11.9	17.5	17.3	9.5	5.4	4.8	2.5	3.0	3.4	3.0	4.1	11.5	15.3	5.9	7.9	5.4	6.3	6.7	8.8	17.5
26	4.6	S	8.8	8.9	7.4	13.7	9.0	7.6	9.0	7.6	6.5	1.5	10.0	11.6	7.4	10.1	5.2	3.4	5.2	12.2	2.5	4.7	5.9	4.9	7.3	13.7
27	5.1	S	16.2	9.2	9.1	12.8	14.0	17.5	13.0	9.6	7.1	4.3	4.1	2.4	1.5	2.2	4.0	3.4	3.6	5.2	7.5	5.8	7.0	4.2	7.3	17.5
28	3.0	S	3.2	3.7	4.3	3.2	4.3	4.3	3.9	3.1	3.0	3.5	3.5	4.5	4.0	5.5	4.1	4.2	5.2	6.2	3.3	13.6	17.7	10.1	5.3	17.7
29	9.2	S	4.1	5.5	4.2	5.4	4.9	4.0	4.5	3.2	4.0	2.6	2.9	3.6	1.9	1.8	3.8	2.4	4.1	1.8	3.7	3.5	4.4	3.2	3.9	9.2
30	4.6	S	3.2	4.8	4.0	4.3	4.3	6.6	5.4	4.1	4.4	3.9	3.8	4.0	4.7	4.5	4.0	4.7	3.8	5.6	3.9	3.8	4.6	3.1	4.3	6.6
31	3.6	S	3.7	3.0	6.8	4.9	4.4	5.1	4.6	4.4	4.1	4.7	5.0	3.8	3.2	4.0	4.3	5.0	4.7	4.1	4.5	4.2	5.0	5.1	4.4	6.8
NO.	31	-	31	31	31	31	31	31	31	31	30	30	30	30	30	30	30	31	31	31	31	31	31	31	706	100.0%
MEAN	6.6	-	6.5	7.2	8.0	8.0	8.0	8.8	8.2	6.9	5.9	5.5	4.7	4.4	4.0	4.6	5.2	5.1	5.5	6.6	7.5	7.3	7.3	6.8		
MAX	16.5	-	16.2	17.8	17.8	19.1	16.3	17.6	17.3	15.0	11.3	11.8	10.6	12.8	13.8	16.3	16.8	14.1	15.3	17.0	23.8	13.6	21.1	19.1		



Number of 1HR Exceedences	0	Operational Time	744 HRS
Number of Non-Zero Readings	706	Operational Uptime	100.0 %
Maximum 1-HR Average	23.8 PPB	Monthly Average	6.5 PPB
Maximum 24-HR Average	10.2 PPB		
Monthly Calibration	7		
Standard Deviation	4.0		

Lagoon NOx (ppb) – October 2023

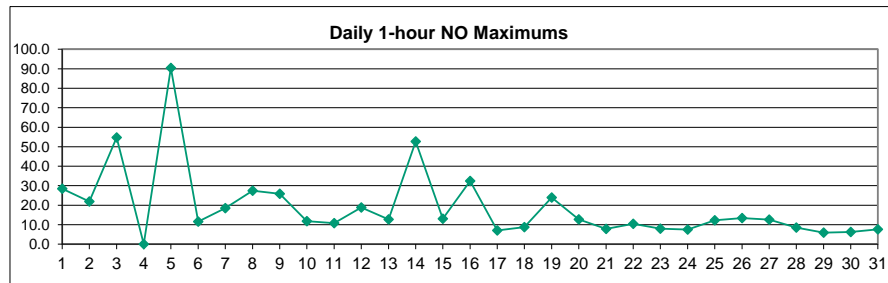
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	9.1	S	21.1	37.8	39.3	39.6	28.9	17.8	38.3	20.7	12.7	23.4	9.4	5.7	15.7	11.8	4.0	5.1	7.0	7.0	7.8	9.7	11.7	6.8	17.0	39.6
2	11.3	S	4.8	14.8	11.9	10.8	6.3	18.1	15.3	27.5	32.0	7.4	4.2	4.6	12.7	8.1	18.4	17.6	8.9	13.5	16.6	12.7	9.5	9.5	12.9	32.0
3	9.7	S	11.3	10.4	17.5	36.5	38.0	37.4	68.6	27.4	37.9	21.8	5.0	4.5	7.3	14.4	15.7	4.9	4.0	3.9	5.0	6.1	3.8	17.9	17.8	68.6
4	7.2	S	9.5	10.0	7.3	6.9	22.8	24.1	19.6	10.0	C	C	C	C	C	C	13.2	5.5	14.9	26.0	24.4	19.7	22.6	-	-	
5	20.9	S	50.7	49.1	60.3	109.4	64.7	23.4	35.4	16.5	4.5	10.5	13.5	14.6	4.9	3.8	16.9	11.4	5.3	3.5	3.4	18.8	35.4	50.4	27.3	109.4
6	25.0	S	10.6	14.1	19.9	7.2	6.6	7.1	9.6	16.8	21.5	21.1	12.6	9.5	5.9	2.6	6.2	7.9	10.9	28.3	23.0	19.9	17.7	6.0	13.5	28.3
7	6.3	S	7.9	4.5	4.6	5.6	7.9	9.2	6.7	12.8	7.1	6.4	16.8	11.6	11.0	3.9	1.9	3.0	7.2	13.9	11.9	25.4	32.9	17.5	10.3	32.9
8	16.8	S	6.4	5.6	4.7	8.5	4.4	4.8	5.0	6.1	4.8	38.1	14.8	4.2	1.7	8.3	4.8	2.3	4.5	13.7	35.2	15.5	10.6	16.5	10.3	38.1
9	14.1	S	20.7	41.4	30.4	21.6	24.9	18.4	14.5	26.8	20.3	21.2	3.1	6.7	2.5	2.8	2.6	2.7	22.1	17.4	16.0	13.0	19.6	14.7	16.4	41.4
10	19.3	S	8.3	14.7	6.9	16.1	13.9	13.2	15.2	5.0	10.7	7.4	9.7	9.2	11.9	23.7	23.7	25.7	7.5	7.2	7.9	8.5	15.6	10.4	12.7	25.7
11	5.3	S	5.6	7.6	12.5	6.6	14.6	18.1	13.3	18.0	13.8	13.4	7.3	2.8	3.0	4.0	17.2	22.7	4.8	7.3	18.1	18.2	6.5	7.1	10.8	22.7
12	4.9	S	3.3	5.4	22.7	14.6	10.9	17.9	21.6	17.9	22.5	14.7	9.2	10.2	10.0	16.6	9.6	8.8	15.1	34.9	11.0	24.5	13.2	5.3	14.1	34.9
13	6.6	S	7.4	10.7	15.7	12.2	8.9	22.4	18.9	8.9	6.4	9.0	9.4	4.6	3.8	3.3	3.6	3.3	3.4	7.2	8.6	11.4	11.9	18.9	9.4	22.4
14	24.1	S	15.3	21.7	22.8	13.6	15.5	20.9	47.3	64.5	33.8	21.9	6.6	2.2	2.1	4.0	4.3	8.6	4.8	9.0	19.3	16.9	12.7	8.5	17.4	64.5
15	8.0	S	7.3	6.5	17.4	28.1	15.8	11.6	14.1	18.6	7.6	2.9	3.1	3.0	1.5	4.8	3.6	3.5	13.2	7.8	26.1	17.6	11.9	14.5	10.8	28.1
16	10.3	S	27.0	49.0	50.1	21.5	15.5	22.6	19.6	40.7	22.6	10.2	8.7	23.1	23.6	27.8	24.7	7.0	6.8	8.0	3.8	4.5	3.6	3.0	18.9	50.1
17	1.5	S	9.7	9.8	5.1	2.1	3.0	4.8	5.4	4.4	2.6	6.2	13.3	2.5	1.8	5.8	6.2	4.8	7.1	3.5	7.4	4.5	2.5	4.0	5.1	13.3
18	2.9	S	2.7	2.5	2.7	4.4	3.1	9.4	6.3	4.3	4.2	4.5	5.5	3.8	4.9	2.4	2.1	4.3	16.2	9.8	13.4	12.3	10.1	11.2	6.2	16.2
19	8.6	S	15.0	16.8	18.8	18.7	21.9	32.4	35.9	27.7	11.1	13.2	9.4	4.6	2.9	1.7	1.4	3.3	3.2	5.3	5.6	6.8	7.8	7.8	12.2	35.9
20	7.1	S	2.8	6.9	16.9	13.3	18.3	24.6	21.8	7.2	7.4	4.5	3.6	11.9	6.6	4.6	19.4	7.1	10.9	12.4	9.6	20.2	21.5	20.3	12.1	24.6
21	20.4	S	16.6	17.0	15.3	15.0	13.7	12.7	7.6	13.2	9.6	8.4	13.1	7.8	5.5	11.8	4.4	10.4	5.1	5.0	3.8	3.3	2.0	2.4	9.7	20.4
22	2.3	S	2.1	4.2	11.5	3.8	3.1	3.5	13.0	10.0	13.0	22.1	18.9	14.2	16.4	10.1	2.6	4.3	5.6	3.8	8.2	6.6	4.3	2.9	8.1	22.1
23	4.3	S	15.4	13.5	4.5	3.8	3.8	10.0	14.6	12.1	12.8	10.1	6.0	11.4	8.3	6.5	7.4	3.9	3.1	3.4	3.4	3.0	2.9	3.1	7.3	15.4
24	2.9	S	6.4	7.6	16.7	7.3	6.9	4.5	4.6	6.0	4.4	6.2	7.3	10.0	7.0	8.6	9.0	9.5	9.7	10.3	12.2	10.1	11.1	8.2	16.7	10.1
25	17.4	S	13.2	17.1	21.6	22.2	15.8	27.1	29.4	18.4	9.1	8.4	4.8	5.7	6.6	5.9	6.3	19.5	24.8	8.8	13.8	6.5	7.7	10.4	13.9	29.4
26	6.1	S	13.0	13.2	11.5	20.9	11.3	9.4	13.8	12.0	11.3	3.1	20.5	24.8	15.0	20.7	7.4	4.5	6.5	18.0	3.6	6.3	7.7	6.0	11.6	24.8
27	6.8	S	27.9	12.8	12.4	22.5	21.8	29.9	24.8	20.4	17.8	10.9	9.9	5.5	3.2	3.9	5.4	4.5	5.6	6.3	9.2	7.8	13.1	6.3	12.6	29.9
28	4.5	S	4.4	5.3	7.2	4.4	6.9	7.0	5.9	5.4	5.9	7.4	6.9	10.4	7.7	11.0	6.4	5.3	8.2	12.4	4.3	22.0	22.2	11.3	8.4	22.2
29	11.0	S	5.3	10.5	5.3	7.8	6.7	5.2	8.8	6.0	9.7	5.9	6.1	8.7	4.0	3.3	5.4	3.8	6.7	3.1	6.9	5.4	7.4	5.6	6.5	11.0
30	7.9	S	4.7	9.7	5.8	6.7	5.5	10.2	9.3	7.4	10.6	9.0	8.4	7.9	8.0	7.0	6.1	7.3	6.6	9.9	9.1	6.5	7.3	4.1	7.6	10.6
31	5.7	S	10.9	4.7	14.2	8.5	7.1	8.2	6.6	7.7	7.9	9.8	10.7	8.1	5.6	6.2	7.2	8.0	6.9	5.7	7.0	6.0	9.3	8.3	7.8	14.2
NO.	31	-	31	31	31	31	31	31	31	31	30	30	30	30	30	30	30	31	31	31	31	31	31	31	706	100.0%
MEAN	9.9	-	11.8	14.7	16.6	16.8	14.5	15.7	18.4	16.1	13.2	12.0	9.2	8.5	7.4	8.3	8.5	8.0	8.3	10.1	11.5	12.1	12.0	11.1		
MAX	25.0	-	50.7	49.1	60.3	109.4	64.7	37.4	68.6	64.5	37.9	38.1	20.5	24.8	23.6	27.8	24.7	25.7	24.8	34.9	35.2	25.4	35.4	50.4		



Number of Non-Zero Readings	706		
Maximum 1-HR Average	109.4 PPB		
Maximum 24-HR Average	27.3 PPB		
Monthly Calibration	7	Operational Time	744 HRS
Standard Deviation	10.06	Operational Uptime	100.0 %
		Monthly Average	12.0 PPB

Lagoon NO (ppb) – October 2023

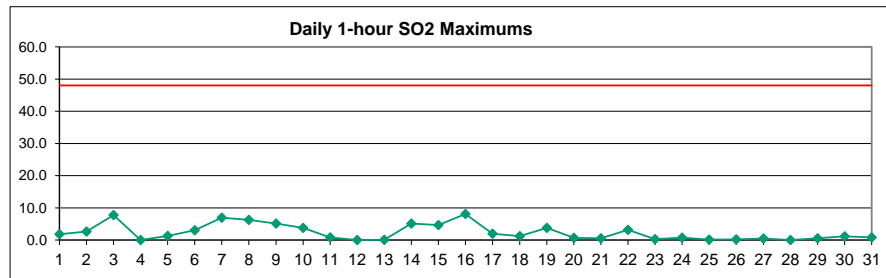
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	2.6	S	11.4	24.2	23.6	23.5	15.2	8.8	28.5	14.7	8.6	16.9	6.2	3.9	10.2	7.9	2.9	3.6	4.1	3.5	3.7	5.2	7.8	4.3	10.5	28.5
2	7.3	S	2.8	12.1	8.5	7.5	3.5	11.4	9.3	19.7	21.9	4.4	3.1	3.2	7.3	4.5	9.6	8.9	3.8	5.4	6.7	3.5	2.9	3.9	7.4	21.9
3	4.6	S	5.7	5.5	10.4	25.0	26.3	25.7	54.7	18.9	27.8	14.3	3.4	3.2	4.5	7.6	7.3	2.9	2.7	2.6	2.8	3.0	2.5	8.9	11.8	54.7
4	3.4	S	4.3	4.6	3.2	3.3	9.7	10.0	8.3	4.4	C	C	C	C	C	C	C	5.0	1.0	9.0	17.5	16.6	11.2	7.6	-	-
5	5.1	S	37.0	33.7	45.1	90.4	48.5	11.7	20.6	9.1	2.4	5.6	6.9	7.1	2.5	2.1	8.1	4.1	1.3	1.0	1.1	7.1	14.5	31.3	17.2	90.4
6	8.7	S	2.8	5.5	10.0	1.9	1.7	2.6	5.0	9.4	11.6	10.7	6.2	3.9	2.4	1.3	2.2	2.6	4.1	11.4	8.8	8.2	8.0	2.1	5.7	11.6
7	2.0	S	2.8	0.9	1.1	1.9	3.4	4.2	3.2	8.7	3.8	3.4	9.7	5.4	5.4	1.8	1.0	1.0	1.4	3.0	3.2	12.6	18.5	9.8	4.7	18.5
8	8.9	S	2.5	2.5	1.7	4.4	1.5	1.9	2.5	3.4	2.5	27.4	8.1	2.1	1.1	3.9	2.1	1.0	1.1	4.3	11.6	2.1	1.4	4.3	4.5	27.4
9	4.9	S	9.2	25.8	16.3	9.7	12.5	7.8	6.8	15.0	10.5	10.3	1.4	2.8	1.2	1.4	1.2	1.1	11.4	2.9	1.6	1.3	6.5	4.4	7.2	25.8
10	5.7	S	2.4	5.1	2.0	6.0	4.5	4.7	6.6	1.8	4.1	2.6	3.9	3.6	3.8	8.5	9.1	11.8	1.3	1.1	1.0	2.6	6.1	2.8	4.4	11.8
11	1.1	S	1.3	2.7	5.3	2.4	4.8	6.4	5.3	5.7	5.2	4.3	2.5	1.2	1.2	1.4	6.3	10.9	1.4	1.3	7.9	10.1	2.2	3.5	4.1	10.9
12	1.0	S	1.1	2.6	15.8	7.3	1.7	8.2	13.3	7.2	11.4	6.7	3.8	5.1	4.4	8.0	4.4	2.3	6.2	18.8	4.0	12.1	4.6	1.5	6.6	18.8
13	2.4	S	3.5	4.6	8.3	5.3	3.5	12.7	11.4	4.3	2.4	3.7	4.2	1.8	1.7	1.2	1.2	1.1	1.0	3.8	2.5	7.4	6.9	8.1	4.5	12.7
14	13.0	S	5.5	11.6	11.9	3.8	5.6	11.6	37.1	52.7	26.3	14.3	3.3	1.2	1.2	1.8	1.5	1.6	0.9	1.6	6.6	7.1	3.0	1.4	9.8	52.7
15	1.3	S	1.8	2.9	8.8	13.1	5.5	1.5	6.1	8.9	3.6	1.5	1.7	1.6	1.0	2.3	1.7	1.1	4.2	1.2	7.6	7.2	3.9	5.5	4.1	13.1
16	2.5	S	14.6	31.3	32.4	10.1	6.2	8.9	8.3	25.9	13.3	4.9	4.0	10.5	10.0	11.7	8.2	3.0	2.5	3.5	1.3	1.4	1.2	1.1	9.4	32.4
17	0.9	S	4.1	3.7	1.4	1.2	1.3	1.9	2.1	1.7	1.4	3.0	7.0	1.4	1.2	2.9	2.6	1.8	2.5	1.2	3.3	1.4	1.1	1.8	2.2	7.0
18	1.3	S	1.2	1.2	1.3	1.9	1.3	3.9	2.5	1.9	1.9	2.0	3.0	2.0	2.4	1.3	1.1	1.7	8.8	4.4	6.9	7.0	4.3	5.4	3.0	8.8
19	4.1	S	8.8	10.1	10.5	10.0	12.2	20.8	23.9	19.1	5.4	7.4	4.5	2.4	1.7	1.2	1.0	1.9	1.4	2.5	2.2	2.2	2.1	2.9	6.9	23.9
20	1.3	S	1.0	1.7	5.9	2.6	5.0	7.2	8.5	2.8	2.6	1.7	1.7	4.3	2.2	1.6	8.4	1.1	2.1	3.4	1.2	10.2	12.7	8.9	4.3	12.7
21	5.0	S	4.7	6.1	5.8	5.6	5.6	5.8	3.1	7.9	5.2	4.5	7.0	3.7	2.0	5.1	1.3	4.0	1.2	1.6	1.1	1.0	1.0	0.9	3.9	7.9
22	0.9	S	0.9	1.2	4.0	1.1	1.0	1.1	5.2	3.7	5.4	10.5	8.5	6.4	6.5	4.6	1.2	1.4	1.8	1.2	2.2	1.7	1.1	0.8	3.1	10.5
23	1.2	S	7.9	6.3	1.4	1.1	1.0	4.1	6.2	5.2	5.7	4.8	2.1	5.3	3.1	2.5	2.4	1.3	1.1	1.0	1.1	1.1	1.1	1.1	3.0	7.9
24	1.1	S	2.1	2.5	7.5	1.8	1.9	1.2	1.7	2.3	2.0	3.0	3.5	4.9	3.1	3.2	2.3	1.4	1.1	1.1	1.4	3.0	1.7	1.9	2.4	7.5
25	5.2	S	3.2	5.5	7.3	9.5	4.1	9.7	12.3	9.1	3.9	3.8	2.3	2.9	3.3	3.0	2.3	8.1	9.6	3.1	6.1	1.2	1.6	3.8	5.3	12.3
26	1.6	S	4.4	4.6	4.3	7.4	2.5	2.0	5.1	4.6	5.1	1.7	10.7	13.4	7.7	10.8	2.3	1.2	1.5	5.9	1.2	1.7	1.9	1.2	4.5	13.4
27	1.8	S	11.7	3.8	3.4	9.9	8.0	12.6	12.0	11.0	11.0	6.7	5.9	3.2	1.8	1.8	1.5	1.1	2.1	1.2	1.9	2.1	6.3	2.2	5.4	12.6
28	1.5	S	1.3	1.8	3.0	1.4	2.8	2.9	2.2	2.5	3.1	4.1	3.5	6.0	3.9	5.6	2.4	1.2	3.1	6.3	1.0	8.5	4.6	1.3	3.2	8.5
29	2.0	S	1.3	5.2	1.2	2.6	1.9	1.3	4.4	2.9	5.9	3.4	3.4	5.2	2.2	1.6	1.7	1.5	2.7	1.3	3.4	2.0	3.2	2.5	2.7	5.9
30	3.4	S	1.6	5.1	1.9	2.6	1.4	3.8	4.2	3.5	6.3	5.2	4.7	4.1	3.5	2.7	2.3	2.8	2.8	4.4	5.4	2.8	2.8	1.1	3.4	6.3
31	2.2	S	7.3	1.8	7.6	3.7	2.8	3.2	2.2	3.4	3.9	5.3	5.9	4.4	2.5	2.3	3.0	3.0	2.3	1.8	2.6	1.9	4.5	3.3	3.5	7.6
NO.	31	-	31	31	31	31	31	31	31	31	30	30	30	30	30	30	30	31	31	31	31	31	31	31	706	100.0%
MEAN	3.5	-	5.5	7.6	8.7	9.0	6.7	7.1	10.4	9.4	7.5	6.6	4.7	4.2	3.5	3.9	3.4	3.1	3.0	3.7	4.2	5.0	4.9	4.5		
MAX	13.0	-	37.0	33.7	45.1	90.4	48.5	25.7	54.7	52.7	27.8	27.4	10.7	13.4	10.2	11.7	9.6	11.8	11.4	18.8	17.5	16.6	18.5	31.3		



Number of Non-Zero Readings	706
Maximum 1-HR Average	90.4 PPB
Maximum 24-HR Average	17.2 PPB
Monthly Calibration	7
Standard Deviation	7.106
Operational Time	744 HRS
Operational Uptime	100.0 %
Monthly Average	5.7 PPB

Lagoon SO₂ (ppb) – October 2023

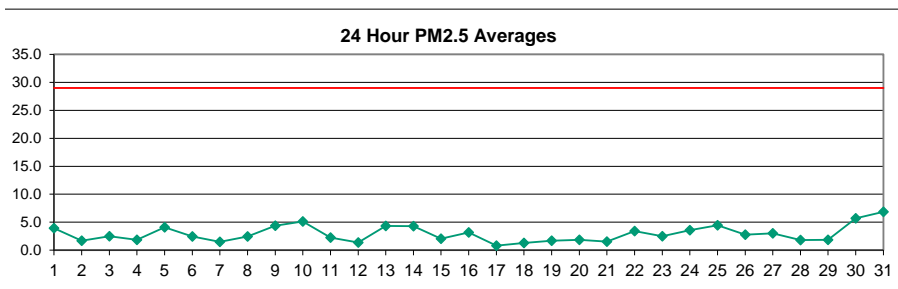
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	0.2	S	0.1	0.6	1.1	1.2	1.1	0.5	1.8	1.1	0.4	0.9	0.8	0.4	1.2	1.6	0.3	0.4	0.3	0.2	0.5	0.7	0.8	0.4	0.7	1.8
2	0.5	S	0.3	1.1	0.7	0.9	0.5	0.9	1.1	2.3	2.7	0.7	0.6	0.3	1.8	0.9	1.1	1.5	0.8	0.5	1.2	0.8	0.4	0.4	1.0	2.7
3	0.6	S	0.7	0.8	1.4	2.7	2.2	1.5	7.8	2.1	4.0	2.3	0.5	0.3	1.5	2.3	0.7	0.6	0.5	0.0	0.3	0.4	0.4	1.7	1.5	7.8
4	0.6	S	0.4	0.5	0.5	0.5	1.0	1.3	1.2	0.6	C	C	C	C	C	C	C	0.0	0.0	0.0	0.1	0.1	0.0	0.0	-	-
5	0.0	S	0.2	0.3	0.6	1.3	0.6	0.0	0.1	0.0	0.0	0.2	0.4	0.1	0.0	0.0	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.2	1.3
6	0.5	S	0.4	0.6	0.9	0.0	0.0	0.0	0.1	1.3	2.2	1.3	0.1	0.0	0.0	0.0	0.1	0.5	0.7	3.1	3.0	2.7	2.1	0.2	0.9	3.1
7	0.1	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.4	1.2	0.1	0.0	0.0	0.0	0.2	0.3	1.2	1.4	5.1	6.9	4.4	0.9	6.9
8	2.8	S	0.7	0.3	0.0	0.7	0.1	0.1	0.2	0.5	0.3	6.3	1.3	0.2	0.0	1.6	0.5	0.1	0.2	0.9	5.6	1.0	0.3	0.6	1.0	6.3
9	1.3	S	1.6	3.9	3.4	1.9	2.7	1.3	1.6	3.5	5.1	4.4	0.3	0.7	0.2	0.3	0.2	0.2	0.5	0.5	0.4	0.6	2.7	2.7	1.7	5.1
10	1.6	S	0.7	1.0	1.1	1.4	0.6	0.6	0.4	0.4	0.5	0.3	0.3	0.9	1.1	2.7	1.2	3.8	0.7	0.5	0.4	0.3	0.8	1.0	1.0	3.8
11	0.5	S	0.3	0.4	0.4	0.4	0.6	0.8	0.6	0.8	0.4	0.5	0.3	0.2	0.2	0.1	0.3	0.3	0.3	0.1	0.1	0.1	0.1	0.0	0.3	0.8
12	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1
14	0.4	S	0.1	0.8	0.1	0.0	0.0	0.5	3.3	5.1	4.1	3.1	0.4	0.1	0.0	0.3	0.1	0.0	0.0	0.2	1.7	2.0	1.0	0.2	1.0	5.1
15	0.2	S	0.5	0.7	1.6	4.4	1.3	0.4	1.3	1.8	0.4	0.1	0.5	0.0	0.0	0.4	0.0	0.0	0.7	0.3	4.3	4.7	1.9	0.9	1.2	4.7
16	0.5	S	2.7	7.2	8.1	2.2	0.2	0.3	0.6	5.0	2.3	0.9	1.1	3.9	3.1	2.8	3.6	1.8	1.5	0.6	0.3	0.0	0.2	0.4	2.1	8.1
17	0.4	S	2.0	0.2	0.1	0.2	0.2	0.1	0.1	0.0	0.0	0.2	0.5	0.1	0.1	0.1	0.2	0.4	0.2	0.0	0.1	0.0	0.1	0.3	0.2	2.0
18	0.2	S	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.4	0.3	0.8	0.3	0.4	1.3	0.2	1.3
19	0.3	S	0.3	0.7	1.5	1.4	1.4	2.0	2.6	3.8	1.1	1.6	1.0	0.7	0.2	0.1	0.1	0.2	0.1	0.3	0.9	0.9	0.4	0.2	1.0	3.8
20	0.1	S	0.1	0.7	0.7	0.5	0.3	0.2	0.3	0.2	0.3	0.5	0.0	0.0	0.2	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.7
21	0.0	S	0.0	0.1	0.0	0.1	0.2	0.1	0.1	0.2	0.1	0.0	0.3	0.3	0.4	0.6	0.4	0.3	0.2	0.1	0.1	0.0	0.0	0.1	0.2	0.6
22	0.0	S	0.0	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.4	3.2	3.1	2.9	1.9	0.6	0.3	0.2	0.2	0.4	0.3	0.2	0.1	0.0	0.7	3.2
23	0.0	S	0.1	0.1	0.1	0.1	0.1	0.3	0.1	0.2	0.3	0.3	0.1	0.2	0.1	0.2	0.2	0.0	0.2	0.1	0.0	0.1	0.0	0.0	0.1	0.3
24	0.0	S	0.0	0.0	0.2	0.2	0.3	0.3	0.8	0.7	0.5	0.4	0.3	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.8
25	0.0	S	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.0	0.1	0.2	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.2
26	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.2
27	0.0	S	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.1	0.5
28	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.6	0.5	0.1	0.6
30	0.1	S	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.6	0.7	0.3	1.2	0.4	0.1	0.1	0.3	0.5	0.0	0.2	1.2
31	0.0	S	0.1	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.2	0.8	0.5	0.2	0.0	0.0	0.1	0.8	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.8
NO.	31	-	31	31	31	31	31	31	31	31	30	30	30	30	30	30	30	31	31	31	31	31	31	31	706	100.0%
MEAN	0.4	-	0.4	0.7	0.7	0.7	0.4	0.4	0.8	1.0	0.9	1.0	0.5	0.4	0.4	0.5	0.4	0.4	0.3	0.3	0.7	0.7	0.7	0.5	0.4	0.5
MAX	2.8	-	2.7	7.2	8.1	4.4	2.7	2.0	7.8	5.1	5.1	6.3	3.1	3.9	3.1	2.8	3.6	3.8	1.5	3.1	5.6	5.1	6.9	4.4	2.8	7.8



Number of 1HR Exceedences	0
Number of Non-Zero Readings	525
Maximum 1-HR Average	8.1 PPB
Maximum 24-HR Average	2.1 PPB
Monthly Calibration	7
Standard Deviation	1.056
Operational Time	744 HRS
Operational Uptime	100.0 %
Monthly Average	0.6 PPB

Lagoon PM_{2.5} (µg/m³) – October 2023

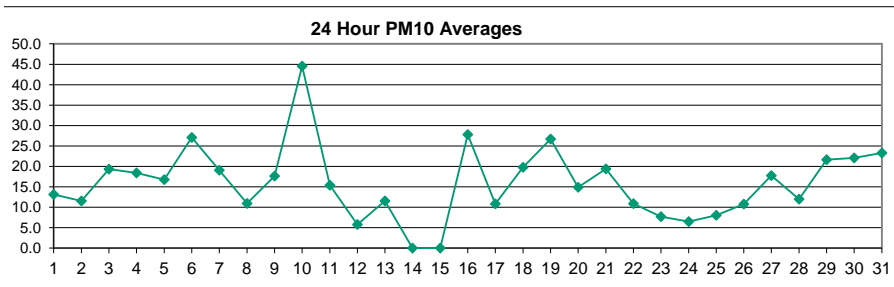
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	4.8	3.1	3.9	5.2	7.8	6.8	7.8	7.2	4.7	6.7	6.8	7.4	7.7	4.8	1.0	4.0	3.4	0.6	0.4	0.0	0.0	0.5	0.0	0.0	3.9	7.8
2	0.0	0.0	1.3	0.7	0.0	0.0	3.4	2.4	1.9	4.7	1.2	0.1	2.6	0.6	0.6	3.1	2.8	2.8	3.2	3.6	2.1	0.0	1.3	2.3	1.7	4.7
3	4.3	3.1	0.0	1.3	3.2	3.2	2.4	3.4	6.0	6.8	5.3	5.9	4.4	1.5	0.2	0.1	0.0	1.6	2.2	0.6	0.0	0.0	2.1	2.5	2.5	6.8
4	2.8	3.2	1.1	0.0	1.1	0.0	0.0	0.1	5.0	5.7	4.3	3.1	1.7	1.7	2.4	0.6	0.0	0.0	0.4	0.1	1.0	3.9	5.9	1.8	5.9	
5	4.6	3.0	5.9	6.2	7.5	8.9	18.2	6.0	2.6	5.2	3.2	0.0	0.0	0.0	3.2	3.3	0.7	3.1	4.1	2.6	2.2	0.0	0.0	7.6	4.1	18.2
6	5.7	3.5	1.0	1.7	4.4	3.1	2.2	3.6	3.5	1.0	0.0	4.7	4.6	6.5	7.7	4.3	0.0	0.0	0.0	0.0	0.0	1.2	0.5	0.1	2.5	7.7
7	0.3	4.1	2.7	0.0	0.4	1.6	1.7	2.8	1.0	0.0	0.1	0.6	0.0	2.5	2.8	1.1	0.0	0.0	0.0	2.2	1.1	2.5	4.9	3.8	1.5	4.9
8	1.0	5.0	3.9	2.0	1.0	0.9	1.5	1.9	0.7	0.0	0.0	0.3	4.5	5.9	3.1	1.6	2.7	2.6	2.4	3.7	2.7	1.9	2.9	6.3	2.4	6.3
9	7.1	9.1	6.7	5.3	5.7	4.1	2.4	4.9	5.0	2.2	3.7	5.1	5.2	4.5	3.6	1.4	0.0	0.2	0.9	1.4	5.5	6.1	6.9	8.2	4.4	9.1
10	8.6	7.9	5.3	5.8	6.5	9.6	9.0	7.5	7.2	5.7	4.4	3.4	4.8	2.8	0.9	9.4	7.4	6.0	1.9	0.9	2.2	1.2	2.7	2.4	5.1	9.6
11	4.5	7.8	5.0	4.6	2.5	0.4	0.6	1.1	3.1	3.9	2.3	1.3	0.2	0.0	0.0	0.0	0.0	1.4	2.5	1.3	0.4	0.0	5.0	5.9	2.2	7.8
12	3.1	1.6	1.2	0.6	0.0	0.0	0.0	2.2	2.3	1.0	1.4	1.7	0.4	0.7	0.0	0.0	0.5	2.3	1.6	0.5	1.4	2.0	4.7	3.1	1.4	4.7
13	0.0	1.7	2.8	3.8	3.4	7.6	5.8	6.7	10.2	8.2	5.5	6.9	5.3	4.9	4.5	2.9	1.2	2.7	2.9	1.7	3.2	2.8	5.1	5.1	4.4	10.2
14	6.1	5.5	8.7	6.3	8.9	6.1	0.4	0.0	3.9	10.1	10.3	7.2	2.7	0.7	1.7	0.7	0.0	0.0	1.4	5.0	3.5	4.5	5.6	4.0	4.3	10.3
15	3.8	4.2	4.0	3.5	5.6	6.2	3.6	0.8	0.0	1.0	0.4	1.5	1.0	0.0	0.0	0.3	0.0	1.4	2.2	3.2	3.4	1.9	0.3	0.7	2.0	6.2
16	3.1	5.1	5.0	2.9	2.5	5.0	3.4	0.6	3.5	4.1	2.8	5.4	2.4	0.5	1.6	3.6	6.2	4.7	3.5	4.5	2.3	0.0	2.1	1.7	3.2	6.2
17	2.3	0.4	0.2	1.1	0.0	0.7	0.0	0.0	0.0	2.7	4.0	4.1	3.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	4.1
18	0.0	0.0	3.1	2.5	0.3	1.0	0.0	0.0	1.8	6.4	X	0.0	2.2	3.4	1.0	0.0	0.0	0.4	0.0	1.0	2.6	2.8	1.3	0.0	1.3	6.4
19	0.0	0.0	0.9	4.3	1.4	0.0	2.5	2.9	0.3	0.0	0.7	3.1	5.5	5.4	2.4	2.4	0.2	1.0	2.1	0.0	0.0	2.4	2.0	1.5	1.7	5.5
20	1.0	1.4	0.0	0.0	0.0	0.1	0.9	0.6	1.1	7.0	5.7	2.0	0.2	0.3	0.5	2.5	0.0	0.6	3.0	3.4	5.8	3.7	0.0	4.8	1.9	7.0
21	4.5	4.5	4.1	2.0	1.0	0.8	2.4	2.2	1.6	1.8	0.0	0.0	0.3	1.8	3.3	3.0	2.6	0.0	0.0	0.0	0.4	0.1	0.3	0.0	1.5	4.5
22	0.0	3.3	4.0	3.1	2.9	4.6	3.9	1.7	1.1	2.2	0.2	2.0	6.8	5.8	4.7	6.9	6.1	4.3	2.5	1.7	2.4	3.9	3.9	4.2	3.4	6.9
23	8.3	11.8	9.1	6.3	2.3	0.2	0.9	0.0	0.0	0.0	2.4	1.7	0.3	0.0	0.0	0.0	1.5	1.4	0.1	1.8	1.5	3.7	4.4	1.9	2.5	11.8
24	0.0	1.8	1.1	2.3	5.1	4.7	3.9	6.2	5.0	3.3	2.3	0.8	2.1	4.5	4.0	3.3	2.7	2.5	4.1	4.2	8.1	6.3	3.7	3.9	3.6	8.1
25	4.3	4.2	5.2	5.3	5.4	3.7	4.3	5.6	6.5	7.3	3.8	1.4	2.3	3.5	6.4	6.1	4.5	1.4	0.8	7.6	7.8	3.2	2.3	3.7	4.4	7.8
26	2.6	2.5	1.4	2.1	5.6	4.5	3.5	5.8	4.5	1.9	3.3	5.3	3.1	1.5	3.6	4.8	1.8	0.0	0.7	2.4	1.3	0.0	3.0	1.7	2.8	5.8
27	1.3	2.5	5.6	7.0	4.9	3.9	2.2	3.3	4.9	3.7	1.7	2.2	3.2	4.9	2.2	1.9	0.8	2.1	4.5	1.7	4.2	4.0	0.0	0.0	3.0	7.0
28	0.0	0.1	0.0	0.0	0.0	0.0	1.1	1.1	0.0	0.0	0.7	1.7	3.1	3.1	1.4	2.2	5.1	3.1	2.7	1.7	1.2	2.7	5.6	6.5	1.8	6.5
29	3.9	0.7	0.0	1.1	2.7	2.8	0.0	0.0	0.0	0.0	0.9	1.7	1.8	2.8	3.4	2.2	0.3	4.0	3.6	1.2	2.3	2.1	3.2	3.8	1.9	4.0
30	3.9	4.1	4.9	5.0	4.1	3.7	5.9	4.2	0.9	3.0	C	C	C	C	10.4	8.9	12.6	8.4	5.3	5.3	6.8	5.6	5.3	5.4	5.7	12.6
31	3.8	4.3	7.7	5.2	3.9	4.1	4.2	8.6	8.5	5.7	5.8	6.7	9.2	8.2	6.8	7.6	7.9	8.4	10.4	7.9	7.8	9.0	7.0	6.0	6.9	10.4
NO.	31	31	31	31	31	31	31	31	31	31	29	30	30	30	31	31	31	31	31	31	31	31	31	31	739	99.9%
MEAN	3.1	3.5	3.4	3.1	3.2	3.2	3.2	3.0	3.1	3.6	2.9	2.9	3.0	2.8	2.7	2.8	2.3	2.2	2.2	2.3	2.7	2.4	2.9	3.3		
MAX	8.6	11.8	9.1	7.0	8.9	9.6	18.2	8.6	10.2	10.1	10.3	7.4	9.2	8.2	10.4	9.4	12.6	8.4	10.4	7.9	8.1	9.0	7.0	8.2		



Number of 24HR Exceedences	0
Number of Non-Zero Readings	620
Maximum 1-HR Average	18.2 UG/M3
Maximum 24-HR Average	6.9 UG/M3
Operational Time	743 HRS
Monthly Calibration	4
Operational Uptime	99.9 %
Standard Deviation	2.556
Monthly Average	2.9 UG/M3

Lagoon PM₁₀ (µg/m³) – October 2023

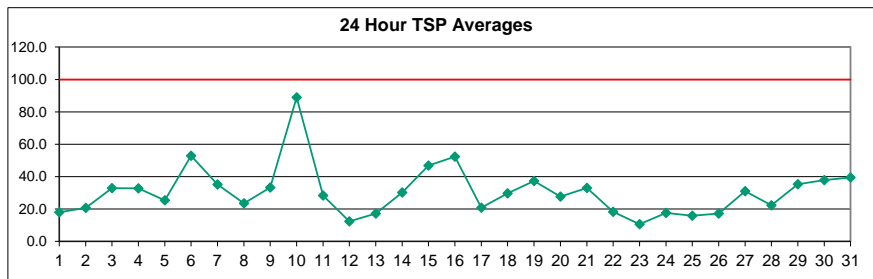
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	9.9	6.7	7.9	7.7	14.3	17.2	15.2	23.5	32.9	22.4	30.6	21.3	26.6	20.4	4.2	24.0	6.3	5.9	2.0	0.0	0.0	1.7	5.5	8.9	13.1	32.9
2	7.0	8.2	8.2	6.0	4.6	2.3	1.7	2.5	13.3	8.1	16.6	37.3	5.5	5.0	5.9	25.5	23.0	20.8	17.6	20.5	21.3	3.4	3.2	9.0	11.5	37.3
3	10.9	8.1	15.2	6.8	4.8	6.1	15.8	20.1	50.4	35.1	39.3	36.4	41.4	13.3	6.9	24.1	53.5	45.0	11.6	5.3	0.4	4.5	3.5	5.1	19.3	53.5
4	104.4	14.5	11.8	6.6	4.5	9.8	6.2	56.2	72.1	23.4	0.4	3.4	10.6	7.6	4.7	16.4	8.9	8.0	8.4	7.1	13.9	14.7	10.0	18.3	18.4	104.4
5	18.9	13.9	16.1	16.7	24.4	23.2	32.6	6.8	14.9	32.3	14.1	6.9	9.2	14.3	20.3	25.5	6.4	20.2	16.3	10.5	8.7	10.4	22.6	17.6	16.8	32.6
6	28.2	43.7	24.4	13.5	12.1	13.9	8.5	6.7	19.0	18.5	32.2	79.0	91.1	79.8	48.2	17.0	4.1	14.6	18.0	17.1	16.3	11.8	18.6	13.4	27.1	91.1
7	13.2	8.6	5.2	4.8	12.3	9.9	14.3	11.5	10.7	13.7	33.2	28.3	17.7	53.6	47.6	13.8	3.0	3.3	5.3	22.5	26.8	26.7	47.3	24.6	19.1	53.6
8	9.0	14.5	6.6	4.3	1.2	6.1	4.6	6.7	11.2	8.8	23.4	9.9	9.5	26.0	0.0	0.0	9.8	9.2	9.2	22.6	23.1	12.2	19.7	15.7	11.0	26.0
9	14.5	16.6	10.5	21.4	14.1	19.7	12.5	10.6	24.0	16.4	20.0	8.5	13.2	6.2	9.7	7.5	17.0	0.2	4.8	5.4	19.3	16.4	32.0	102.4	17.6	102.4
10	27.9	54.5	25.9	79.5	68.9	127.4	74.7	60.4	90.7	63.5	16.3	30.4	31.5	22.4	33.8	51.6	52.6	49.0	18.4	33.0	18.7	12.7	9.5	15.4	44.5	127.4
11	55.0	40.4	22.9	43.9	6.9	8.6	18.6	30.4	22.9	14.0	29.5	16.9	6.2	2.5	0.0	0.8	3.5	11.2	15.0	5.3	3.5	6.1	4.4	1.5	15.4	55.0
12	0.7	3.9	6.7	3.1	0.0	2.4	1.7	3.0	9.5	7.1	4.4	11.1	7.8	3.5	3.6	5.9	21.2	7.2	6.5	10.5	7.5	5.0	6.5	0.0	5.8	21.2
13	17.2	10.7	3.5	16.2	16.5	14.0	21.9	24.7	24.4	24.3	8.5	13.1	18.8	14.1	5.1	7.9	3.9	2.7	3.8	2.1	0.1	0.6	11.6	X	11.6	24.7
14	X	X	X	X	X	X	X	X	X	X	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	-	-
15	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	15.3	39.1	60.4	18.1	1.9	21.2	7.8	6.6	6.6	4.8	51.5	79.3	41.4	11.7	6.7	9.6	-	-
16	10.6	19.5	18.7	23.4	13.9	22.1	22.7	7.9	42.0	49.8	50.5	40.1	24.6	22.1	18.7	17.0	95.3	41.7	75.6	41.4	3.0	2.4	2.1	2.5	27.8	95.3
17	12.6	15.6	44.4	21.8	4.7	3.7	1.2	0.4	0.0	1.3	0.4	4.9	19.2	21.4	0.0	3.1	8.0	17.9	23.1	34.6	10.8	6.6	3.0	1.9	10.9	44.4
18	10.6	5.3	8.7	50.8	25.5	28.5	26.5	8.8	37.0	5.2	8.4	7.7	4.2	5.0	3.3	9.3	6.9	6.4	13.7	67.8	38.8	33.6	31.0	32.3	19.8	67.8
19	34.7	28.7	20.3	33.1	3.3	9.7	30.7	8.8	13.4	8.8	35.8	68.8	86.5	50.5	27.9	102.4	7.9	5.5	4.6	6.0	13.3	16.7	17.0	5.9	26.7	102.4
20	10.8	9.1	17.2	3.7	3.3	5.0	6.6	24.3	13.0	45.5	10.2	8.4	10.8	8.2	17.8	16.0	12.7	21.2	23.2	22.2	11.2	12.2	22.2	22.8	14.9	45.5
21	21.3	23.7	10.1	17.5	9.0	16.4	27.9	16.8	13.0	10.1	23.6	26.8	18.9	68.2	43.5	13.8	31.4	27.6	6.6	7.6	11.7	8.5	7.2	4.5	19.4	68.2
22	4.5	12.2	11.6	9.7	13.5	8.6	4.8	2.8	7.4	6.5	8.5	15.8	26.6	17.3	8.4	16.4	11.4	14.4	9.4	7.4	9.1	17.0	8.3	9.5	10.9	26.6
23	9.2	12.1	9.6	11.7	12.7	5.9	4.2	2.7	5.5	9.5	7.3	6.6	4.0	1.2	20.6	13.1	8.3	8.3	9.3	7.4	4.5	0.0	0.3	10.5	7.7	20.6
24	5.8	1.3	10.6	5.4	18.1	0.6	12.5	2.9	0.3	7.1	12.7	7.8	2.7	10.2	5.5	3.5	8.2	7.4	4.8	0.6	3.2	4.8	5.1	14.1	6.5	18.1
25	6.0	3.3	0.6	17.2	1.5	6.2	7.0	9.7	10.3	17.9	10.1	4.9	8.1	8.6	10.7	10.7	11.6	10.3	9.9	5.4	1.4	4.3	9.2	7.9	8.0	17.9
26	6.0	4.6	11.3	8.4	5.5	18.2	10.4	8.8	13.2	13.8	15.1	15.1	8.8	11.6	12.7	11.1	18.4	8.8	6.3	7.9	15.4	8.9	9.8	8.2	10.8	18.4
27	20.1	17.0	13.1	10.4	8.8	16.2	7.4	15.8	18.8	38.0	48.2	31.8	32.0	38.1	8.1	5.3	13.5	10.5	6.2	22.2	15.6	8.9	9.1	10.5	17.7	48.2
28	13.2	10.5	7.7	6.8	7.7	10.0	7.2	6.1	12.8	13.0	17.5	10.8	6.8	7.9	17.2	18.3	20.1	12.6	10.5	8.9	10.9	9.1	18.2	23.9	12.0	23.9
29	14.8	15.7	5.9	6.3	8.9	7.8	5.5	6.4	4.2	16.3	4.1	36.2	24.7	45.0	11.0	10.1	8.0	41.5	11.8	23.0	67.2	29.5	58.3	57.0	21.6	67.2
30	19.7	19.2	12.6	16.6	21.0	7.8	10.9	11.3	18.1	16.4	C	C	C	C	42.9	46.5	27.9	24.2	35.5	17.8	24.7	17.0	35.5	15.7	22.1	46.5
31	7.8	9.1	23.4	27.1	29.7	18.5	29.5	28.3	16.6	11.6	23.2	30.9	55.5	63.3	41.6	22.2	29.4	15.8	13.6	10.6	14.0	9.5	12.1	15.8	23.3	63.3
NO.	29	29	29	29	29	29	29	29	30	30	29	29	29	29	30	30	30	30	30	30	30	30	30	29	707	95.6%
MEAN	18.1	15.6	13.5	17.3	12.8	15.4	15.3	14.7	21.2	19.9	20.8	22.0	21.5	23.1	16.3	18.2	18.0	15.9	15.1	17.7	15.2	10.9	15.0	16.7	-	-
MAX	104.4	54.5	44.4	79.5	68.9	127.4	74.7	60.4	90.7	63.5	60.4	79.0	91.1	79.8	48.2	102.4	95.3	49.0	75.6	79.3	67.2	33.6	58.3	102.4	-	-



Number of Non-Zero Readings	697		
Maximum 1-HR Average	127.4 UG/M3		
Maximum 24-HR Average	44.5 UG/M3		
Operational Time		711 HRS	
Monthly Calibration	4	Operational Uptime	95.6 %
Standard Deviation	16.83	Monthly Average	17.1 UG/M3

Lagoon TSP ($\mu\text{g}/\text{m}^3$) – October 2023

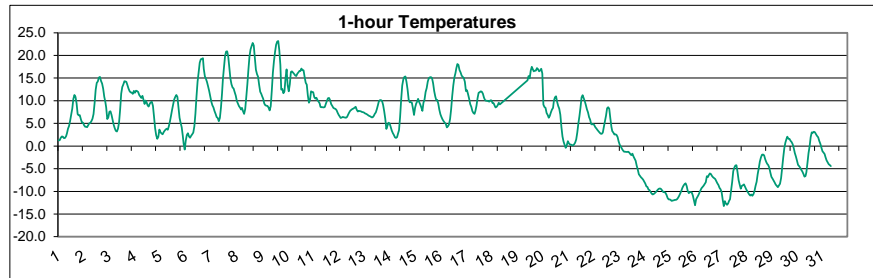
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	11.5	18.9	15.1	20.5	23.0	26.3	24.6	22.9	30.4	22.0	33.1	27.7	35.8	25.7	5.5	24.6	11.1	7.0	9.1	7.5	7.7	7.9	5.3	7.8	18.0	35.8
2	13.8	9.3	5.8	6.0	6.8	9.7	9.8	6.9	17.6	19.1	25.1	66.7	18.5	6.2	6.7	41.5	42.0	41.4	26.1	45.0	33.4	7.8	15.0	15.7	20.7	66.7
3	13.9	22.4	11.1	8.7	10.7	12.9	22.7	44.8	80.6	54.5	76.1	61.3	59.3	13.3	8.7	45.2	105.3	84.7	17.6	8.6	6.0	7.4	4.1	10.3	32.9	105.3
4	198.2	21.8	9.4	18.2	11.0	15.3	18.6	90.4	140.3	45.1	18.8	9.1	17.9	11.8	9.1	27.5	11.8	7.9	18.4	13.1	9.8	12.9	19.0	30.2	32.7	198.2
5	24.6	24.1	22.5	25.9	27.5	23.6	23.1	22.4	13.4	41.4	23.6	22.9	23.1	30.1	27.5	43.5	20.0	33.7	33.1	15.2	10.9	10.0	26.5	39.4	25.3	43.5
6	25.8	78.0	46.5	26.4	37.3	16.0	16.6	18.3	30.8	33.6	70.7	154.7	181.6	137.7	85.1	36.5	15.8	40.1	34.9	41.2	39.9	26.6	44.9	30.8	52.9	181.6
7	18.8	11.2	21.9	12.3	7.1	14.5	18.0	17.6	11.7	12.5	60.6	60.2	32.7	76.5	90.7	26.6	1.0	2.7	21.0	54.7	53.8	55.3	109.2	52.8	35.1	109.2
8	19.7	27.8	23.3	16.9	13.0	18.2	11.7	11.7	13.6	22.2	26.4	15.6	28.4	53.2	15.1	9.7	43.1	5.6	12.2	34.8	44.8	23.6	40.6	31.8	23.5	53.2
9	34.2	31.9	23.7	37.1	31.9	24.7	18.0	19.9	27.6	28.5	24.6	23.0	28.5	11.2	24.8	22.0	12.2	9.0	11.1	21.3	34.8	27.3	52.9	219.3	33.3	219.3
10	54.9	97.3	63.6	162.9	155.0	279.4	161.9	114.2	169.3	118.9	30.7	55.8	54.6	50.9	64.9	92.7	92.9	99.5	50.6	61.4	25.5	19.8	21.5	37.4	89.0	279.4
11	92.4	72.6	35.0	72.9	10.5	24.7	29.6	54.5	46.0	19.1	46.5	21.2	18.2	10.6	5.9	5.3	10.0	26.7	22.0	19.4	11.1	8.5	10.8	5.4	28.3	92.4
12	4.1	6.9	3.1	6.5	6.6	12.6	6.4	6.0	10.8	14.8	8.2	21.5	13.3	9.4	20.2	15.5	27.3	18.2	13.6	22.8	15.4	10.4	10.5	12.2	12.3	27.3
13	10.2	22.1	14.4	22.1	22.0	19.4	21.7	34.3	36.9	27.9	16.7	13.5	18.2	14.6	9.3	15.2	10.4	8.9	7.4	5.2	13.9	10.5	15.1	22.1	17.2	36.9
14	15.8	39.7	25.4	51.8	38.7	12.5	15.5	17.6	23.9	27.0	60.2	50.3	26.0	19.8	9.2	13.9	22.1	23.0	52.7	36.7	55.7	29.6	28.9	30.2	30.3	60.2
15	26.1	50.2	44.5	30.0	79.1	48.2	27.9	32.5	42.3	85.9	119.5	25.5	9.3	44.4	24.9	13.5	17.5	6.3	87.1	167.9	83.5	24.5	14.6	20.3	46.9	167.9
16	23.3	30.7	38.5	35.8	23.7	28.9	25.2	15.7	67.4	79.2	81.8	57.8	29.7	21.0	56.5	45.9	200.7	90.7	167.3	78.4	13.9	10.0	13.6	20.4	52.3	200.7
17	14.0	28.5	76.0	46.0	12.1	8.4	3.7	3.8	6.4	5.4	5.4	5.8	37.1	39.3	5.5	6.6	16.7	37.6	40.4	57.6	17.8	8.9	6.0	10.1	20.8	76.0
18	18.3	15.4	14.1	46.8	38.4	33.9	29.4	20.6	61.1	8.0	10.6	22.1	7.2	9.9	13.1	20.5	11.0	16.6	30.3	90.5	54.9	45.3	47.7	46.3	29.7	90.5
19	62.5	42.3	31.3	43.5	14.7	16.3	55.0	19.1	21.1	14.2	44.8	99.0	127.6	75.2	39.2	35.6	15.3	16.0	0.9	3.6	32.2	41.0	28.0	18.0	37.3	127.6
20	18.5	27.2	28.8	0.6	7.0	7.2	11.8	31.4	24.7	79.7	26.5	22.5	23.3	14.4	37.3	37.9	30.8	40.5	28.9	30.1	21.5	24.2	50.6	40.4	27.7	79.7
21	34.9	31.5	18.0	20.5	22.1	27.2	51.1	40.3	29.1	16.7	37.4	48.3	24.6	107.7	76.8	37.0	51.6	34.3	25.7	15.9	12.9	12.2	10.1	7.5	33.1	107.7
22	8.1	17.4	11.8	9.2	9.7	8.0	8.5	7.6	7.6	19.3	7.6	15.6	36.4	47.2	28.5	37.4	29.9	32.0	15.7	12.5	19.8	24.2	11.9	12.7	18.3	47.2
23	14.3	17.0	0.0	14.8	7.4	7.2	7.9	7.2	20.8	11.3	16.3	12.8	7.8	3.0	27.3	15.6	5.9	4.5	16.5	7.7	7.9	7.9	5.5	10.2	10.7	27.3
24	13.3	21.5	9.4	8.8	18.2	12.9	14.8	6.8	12.8	17.7	33.0	21.4	19.8	25.4	26.7	17.5	32.3	18.7	24.9	13.4	10.6	17.9	10.7	13.2	17.6	33.0
25	12.0	19.4	16.9	11.9	13.3	10.0	18.2	14.3	39.7	52.4	31.5	18.4	12.4	11.2	10.9	9.4	9.6	7.7	9.7	11.8	9.9	14.8	9.7	6.0	15.9	52.4
26	8.4	22.1	24.3	14.7	13.9	16.8	20.4	11.8	9.7	24.9	26.3	22.2	12.0	28.8	29.2	23.1	34.0	9.4	8.9	10.2	13.6	9.8	16.5	3.1	17.3	34.0
27	37.1	31.5	20.5	34.7	8.6	8.1	12.4	23.7	36.1	74.7	103.3	61.0	55.1	73.6	13.9	11.4	12.2	12.7	11.6	37.0	24.4	13.9	12.2	15.4	31.0	103.3
28	15.9	24.5	17.0	21.1	16.8	19.1	25.0	18.1	10.5	17.3	21.5	16.4	20.5	15.1	23.6	36.3	42.1	22.8	16.1	21.6	14.9	14.2	32.8	52.1	22.3	52.1
29	28.0	23.2	11.3	7.9	4.5	6.6	15.8	5.2	2.6	20.5	21.6	60.1	48.4	74.7	19.2	12.5	13.7	84.6	19.3	34.5	39.8	45.3	124.4	122.9	35.3	124.4
30	54.4	36.2	17.5	31.0	26.9	15.6	9.5	14.7	30.0	17.0	C	C	C	C	77.7	79.9	44.9	41.2	63.6	37.2	43.9	34.0	45.3	35.5	37.8	79.9
31	23.4	23.7	29.5	54.1	43.2	42.0	55.7	37.3	28.4	19.6	35.3	56.0	83.0	117.4	83.2	39.9	49.3	22.0	15.3	19.7	15.4	12.7	16.7	22.9	39.4	117.4
NO.	31	31	31	31	31	31	31	31	31	31	30	30	30	30	31	31	31	31	31	31	31	31	31	31	740	100.0%
MEAN	30.7	30.5	23.6	29.7	24.5	26.6	25.5	25.5	35.6	33.9	38.1	39.0	37.0	39.3	31.5	29.0	33.6	29.2	29.4	33.4	25.8	19.9	27.8	32.3		
MAX	198.2	97.3	76.0	162.9	155.0	279.4	161.9	114.2	169.3	118.9	119.5	154.7	181.6	137.7	90.7	92.7	200.7	99.5	167.3	167.9	83.5	55.3	124.4	219.3		



Number of 24HR Exceedences	0
Number of Non-Zero Readings	740
Maximum 1-HR Average	279.4 UG/M3
Maximum 24-HR Average	89.0 UG/M3
Monthly Calibration	4
Standard Deviation	30.5
Operational time	744 HRS
Operational Uptime	100.0 %
Monthly Average	30.4 UG/M3

Lagoon Temperature (°C) – October 2023

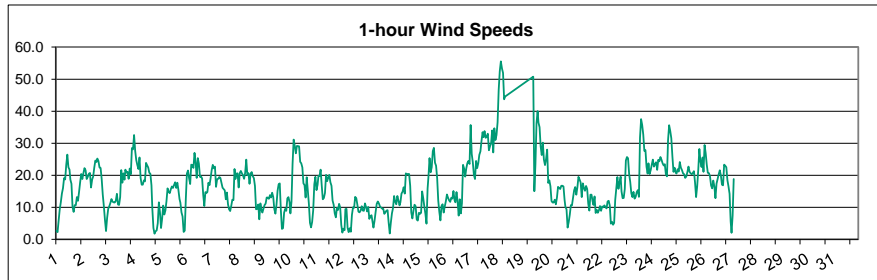
Day	HOUR																								MEAN	MAX	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	1.2	1.3	1.8	2.1	2.1	1.7	1.8	2.2	2.8	3.8	4.5	5.6	7.0	8.3	10.4	11.3	10.8	9.4	7.0	6.8	6.8	5.9	5.2	5.1	5.2	11.3	
2	4.6	4.2	4.2	4.1	4.6	5.0	5.1	5.5	6.0	7.1	9.5	12.4	13.9	14.3	15.1	15.2	14.4	13.8	12.6	10.9	9.8	8.5	5.9	6.3	8.9	15.2	
3	7.6	7.7	6.8	5.8	4.7	3.9	3.4	3.2	3.8	5.2	8.1	11.6	13.0	13.6	14.3	14.3	14.2	13.5	12.7	12.1	11.8	11.8	11.5	12.2	9.4	14.3	
4	11.7	12.2	12.1	11.9	11.3	10.9	10.6	11.1	10.2	9.3	10.0	9.7	9.0	8.7	9.3	9.7	9.8	8.9	6.5	4.0	2.4	1.6	2.0	3.6	8.6	12.2	
5	3.1	2.8	2.6	3.1	3.3	3.6	3.8	3.6	4.3	5.4	6.6	8.0	9.1	10.3	10.9	11.3	10.8	8.5	6.3	5.1	4.2	2.3	0.5	-0.8	5.4	11.3	
6	1.2	2.5	2.8	2.1	1.8	2.3	2.6	3.0	4.3	7.1	10.9	14.2	16.2	18.4	19.1	19.3	19.4	17.0	15.4	14.8	14.1	13.2	12.2	11.0	10.2	19.4	
7	9.8	9.0	8.5	7.7	7.1	6.4	6.2	5.5	6.2	8.5	11.6	14.7	17.3	19.8	20.9	20.9	19.7	17.4	14.9	13.6	12.9	12.7	11.9	11.2	12.3	20.9	
8	10.0	9.4	8.8	8.5	8.0	8.4	7.7	7.1	8.2	10.8	13.6	16.9	19.8	21.3	22.1	22.8	22.2	19.4	16.8	15.9	15.3	13.5	12.0	11.5	13.7	22.8	
9	11.0	10.4	9.4	9.0	8.9	8.8	8.5	7.8	8.8	12.2	16.1	18.7	20.7	22.3	23.1	23.2	21.1	17.9	12.4	12.6	11.7	12.1	15.0	16.9	14.1	23.2	
10	13.4	12.1	13.6	16.4	16.5	16.2	15.9	15.6	16.6	16.0	16.2	16.6	16.5	17.1	16.7	16.7	15.2	14.0	13.6	11.2	9.6	10.1	12.1	11.9	14.5	17.1	
11	11.9	10.8	10.5	10.7	10.2	9.8	9.4	8.6	8.6	8.6	8.5	8.6	9.3	10.0	10.6	10.6	10.1	9.2	8.9	8.5	8.3	8.2	7.9	7.3	9.4	11.9	
12	6.9	6.6	6.2	6.3	6.4	6.3	6.3	6.3	6.4	6.9	7.4	7.8	8.0	8.2	8.3	8.5	8.7	8.0	7.6	7.7	7.7	7.7	7.5	7.5	7.3	8.7	
13	7.4	7.2	7.1	7.0	6.8	6.6	6.5	6.3	6.3	6.6	7.1	7.4	8.2	9.1	9.8	10.1	10.1	10.0	9.0	7.7	6.0	3.8	4.5	5.2	7.3	10.1	
14	5.0	4.3	3.4	2.9	2.5	1.9	1.8	2.0	2.7	3.5	6.4	10.2	13.4	14.7	15.3	15.4	14.1	12.5	10.3	9.7	9.7	9.6	8.3	6.9	7.8	15.4	
15	8.5	9.4	9.7	10.4	9.7	9.2	8.5	7.8	9.6	10.3	11.9	12.8	14.2	15.0	15.2	15.0	13.8	12.1	10.9	10.1	10.2	9.4	8.0	11.1	15.2		
16	7.0	6.4	5.8	5.5	5.1	4.9	4.1	4.4	4.8	5.9	8.2	11.0	13.3	15.1	16.1	17.1	18.1	17.9	16.8	16.2	15.6	15.3	15.0	14.2	11.0	18.1	
17	12.1	12.3	11.4	10.4	9.2	8.7	7.7	7.3	7.1	7.7	8.9	10.5	11.7	11.9	12.1	12.0	11.6	10.7	10.2	10.0	10.0	9.9	9.8	10.1	10.1	12.3	
18	10.1	9.5	9.5	8.9	8.5	8.7	9.0	9.6	9.2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	-	-	
19	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	14.5	15.5	14.9	16.6	17.5	16.9	16.5	16.6	16.6	17.2	17.0	16.5	16.7	17.1	-	-	
20	16.0	9.1	8.6	8.4	7.3	6.9	6.3	6.7	7.4	8.1	8.4	10.0	10.7	11.0	9.8	8.9	8.2	6.9	4.2	2.1	1.0	0.2	-0.4	0.2	6.9	16.0	
21	1.1	0.6	0.3	0.3	0.2	0.1	0.3	0.7	1.5	3.0	4.9	6.6	8.5	10.8	11.2	10.6	9.9	9.1	8.1	7.4	6.4	5.8	4.8	4.8	4.9	11.2	
22	4.9	4.6	4.2	3.9	3.5	3.2	3.0	2.7	2.7	3.0	4.3	5.5	6.7	8.4	8.6	8.2	6.2	4.3	3.3	3.0	2.5	2.6	2.4	2.0	4.3	8.6	
23	1.0	0.3	-0.1	-0.6	-1.0	-1.2	-1.2	-1.3	-1.3	-1.2	-1.5	-1.8	-2.0	-1.7	-2.3	-2.8	-3.2	-4.3	-5.2	-6.2	-6.6	-6.9	-7.1	-7.4	-2.7	1.0	
24	-7.9	-8.3	-8.9	-9.0	-9.6	-9.7	-10.1	-10.4	-10.7	-10.6	-10.4	-10.2	-9.9	-9.6	-9.4	-9.4	-9.5	-9.8	-10.1	-10.2	-10.3	-10.8	-11.4	-11.8	-9.9	-7.9	
25	-11.8	-11.9	-12.1	-12.0	-11.9	-11.8	-11.9	-11.7	-11.4	-11.0	-10.4	-9.9	-9.2	-8.7	-8.4	-8.2	-8.8	-9.9	-10.4	-10.2	-10.1	-10.3	-11.0	-12.0	-10.6	-8.2	
26	-13.1	-11.7	-11.3	-10.9	-10.4	-9.8	-9.3	-9.0	-8.7	-8.3	-8.0	-6.7	-6.9	-6.4	-6.0	-6.2	-6.6	-6.9	-7.1	-7.3	-7.8	-8.2	-8.6	-9.2	-8.5	-6.0	
27	-9.6	-10.2	-11.9	-13.2	-12.2	-12.7	-13.0	-12.7	-12.1	-11.7	-9.8	-7.9	-5.6	-4.7	-4.3	-4.2	-5.8	-7.5	-8.5	-9.4	-8.8	-8.6	-8.5	-9.0	-9.2	-4.2	
28	-9.5	-9.9	-10.3	-10.6	-10.9	-10.7	-11.0	-10.6	-9.9	-8.8	-7.9	-6.2	-4.9	-3.4	-2.5	-1.9	-1.9	-2.1	-2.9	-3.5	-3.9	-4.2	-4.7	-5.9	-6.6	-1.9	
29	-6.8	-7.2	-7.6	-8.0	-8.5	-8.8	-9.1	-8.7	-8.3	-7.1	-4.8	-2.5	-0.5	0.8	1.5	2.1	1.6	1.6	1.2	0.9	0.4	-0.4	-1.5	-2.3	-3.4	2.1	
30	-3.2	-4.1	-4.4	-4.7	-5.2	-5.6	-6.1	-6.8	-6.6	-5.7	-3.7	-1.5	0.0	2.0	3.0	2.9	3.1	3.0	2.6	2.2	1.9	1.1	0.5	-0.4	-1.5	3.1	
31	-1.2	-1.4	-1.8	-2.4	-3.1	-3.6	-4.0	-4.2	-4.4	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	-	-
NO.	30	30	30	30	30	30	30	30	30	28	29	29	29	29	29	29	29	29	29	29	29	29	29	29	704	94.6%	
MEAN	3.4	2.9	2.6	2.5	2.2	2.0	1.8	1.7	2.1	3.0	4.9	6.5	7.7	8.7	9.2	9.3	8.8	7.7	6.4	5.6	5.1	4.6	4.2	3.9			
MAX	16.0	12.3	13.6	16.4	16.5	16.2	15.9	15.6	15.5	16.0	16.2	18.7	20.7	22.3	23.1	23.2	22.2	19.4	16.8	17.2	17.0	16.5	16.7	17.1			



Number of Non-Zero Readings	704		
Maximum 1-HR Average	23.2 C		
Maximum 24-HR Average	14.5 C		
Monthly Calibration	0	Operational Time	704 HRS
Standard Deviation	8.526	Operational Uptime	94.6 %
		Monthly Average	4.8 C

Lagoon Wind Speed (km/hr) – October 2023

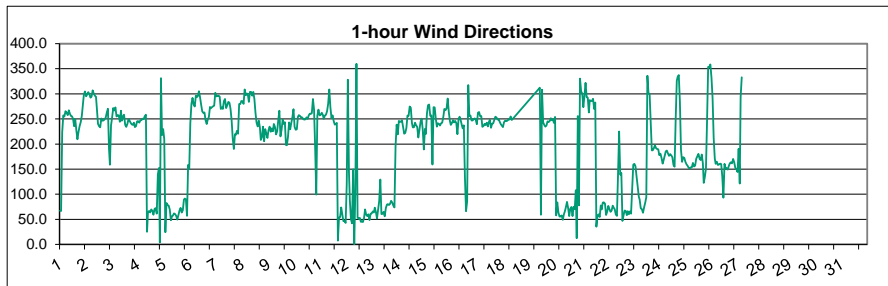
Day	HOUR																								MEAN	MAX	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	2.6	2.2	5.9	9.4	11.6	14.3	16.0	19.1	18.7	23.3	26.5	22.5	21.8	18.6	17.4	10.1	8.6	10.7	10.7	13.2	12.1	14.8	17.9	20.4	14.5	26.5	
2	18.8	20.7	22.3	21.6	18.9	19.5	20.5	20.7	16.2	18.7	19.7	22.5	24.6	24.1	25.2	24.5	22.4	22.3	18.8	14.0	10.3	6.2	2.6	6.7	18.4	25.2	
3	9.5	10.4	11.4	12.6	11.8	11.6	11.5	12.0	14.3	10.9	10.7	13.2	21.6	17.7	20.6	18.6	21.8	20.8	21.1	18.9	22.1	20.3	28.5	28.1	16.7	28.5	
4	32.5	27.7	24.7	23.2	22.0	25.5	19.2	17.0	17.1	18.5	18.1	23.9	23.2	22.4	20.8	20.5	16.9	9.5	3.5	1.8	2.5	2.8	5.1	11.6	17.1	32.5	
5	8.5	3.5	6.5	10.6	7.8	9.0	11.9	15.9	14.8	14.4	15.7	16.5	16.1	17.0	17.8	16.0	17.7	15.4	12.6	11.5	8.5	7.2	2.3	2.7	11.7	17.8	
6	12.6	20.6	21.5	19.2	17.3	23.3	23.2	22.3	27.0	24.1	19.2	25.4	23.7	19.5	19.7	19.0	14.0	10.4	14.8	14.5	14.8	17.7	17.0	19.1	19.2	27.0	
7	21.7	23.3	22.2	22.7	16.4	18.8	18.9	19.5	19.2	17.7	16.2	15.7	15.3	12.5	14.6	11.0	9.4	8.8	10.5	12.4	12.2	21.9	18.9	20.5	16.7	23.3	
8	20.6	16.2	20.7	21.4	20.6	20.0	18.9	20.8	24.9	20.1	20.7	17.3	20.6	21.0	19.8	19.1	16.7	9.4	9.5	10.9	6.3	11.2	9.3	8.4	16.9	24.9	
9	9.6	10.7	11.2	13.1	13.1	12.7	13.8	13.1	14.5	13.3	9.5	8.0	10.9	15.2	17.2	17.5	9.3	3.3	3.5	8.3	9.5	8.9	12.8	13.2	11.3	17.5	
10	11.6	8.1	11.8	23.6	31.2	29.2	26.8	29.2	29.1	29.1	24.2	23.7	22.4	17.5	17.0	13.1	19.4	15.3	11.1	5.2	3.7	5.4	9.2	17.2	18.1	31.2	
11	19.5	15.4	17.0	19.9	19.7	21.8	16.9	12.5	12.9	14.5	20.1	18.2	19.2	20.1	17.8	16.7	12.1	10.9	8.1	6.9	9.8	9.2	11.1	9.9	15.0	21.8	
12	4.5	2.1	3.3	2.9	9.5	9.5	3.6	2.2	3.5	2.4	7.6	10.0	9.9	13.3	12.8	10.8	8.7	8.4	9.0	10.4	9.0	8.9	11.3	10.1	7.7	13.3	
13	8.7	10.1	6.4	7.2	7.6	5.4	3.7	5.8	8.6	11.1	11.9	11.2	10.3	10.0	9.6	9.6	8.0	8.4	9.0	9.1	5.2	1.9	5.3	8.1	8.0	11.9	
14	9.8	13.6	11.8	11.0	13.5	12.1	10.6	11.6	14.3	14.9	16.3	14.3	20.6	20.3	20.4	20.4	16.7	8.4	6.5	8.9	10.8	10.4	6.2	5.9	12.9	20.6	
15	8.3	8.0	8.3	15.0	12.9	10.3	8.0	4.9	15.9	19.6	25.3	20.9	22.5	27.5	28.5	24.0	23.0	19.1	12.1	8.6	5.9	10.4	11.0	8.4	14.9	28.5	
16	10.3	11.9	14.0	13.0	12.2	11.7	13.0	12.7	15.1	12.2	11.6	14.7	11.9	7.4	12.5	8.1	11.3	23.3	22.1	19.6	22.2	23.8	24.5	23.5	15.1	24.5	
17	35.7	26.7	24.1	20.1	18.9	24.5	22.3	23.7	26.4	27.5	30.7	33.5	31.9	33.8	31.7	32.0	33.0	27.8	29.0	30.0	34.0	27.1	34.7	31.0	28.8	35.7	
18	32.6	36.6	46.6	52.5	55.5	53.4	51.9	43.7	44.6	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	-	-	
19	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	50.8	15.1	23.4	36.2	40.1	36.5	35.0	29.0	26.3	30.2	24.9	23.2	25.1	28.0	-	-	
20	17.6	18.5	16.6	12.0	11.5	11.5	12.4	11.0	13.1	16.4	16.1	15.7	16.8	16.7	16.6	12.4	10.1	9.4	3.7	5.4	7.7	10.7	10.7	13.0	12.7	18.5	
21	15.3	16.3	13.9	16.3	19.5	18.7	17.8	13.2	17.5	16.0	15.2	16.7	15.7	11.2	9.0	14.0	14.0	11.9	10.8	13.4	8.2	9.3	8.3	9.1	13.8	19.5	
22	10.4	8.9	10.3	10.0	10.6	10.1	9.7	11.8	12.1	10.6	4.9	5.5	4.6	5.1	12.3	15.9	19.4	15.8	17.9	19.6	15.0	12.8	12.9	15.8	11.8	19.6	
23	24.7	25.7	25.3	20.4	18.0	14.4	13.2	14.9	12.8	13.3	14.8	15.4	13.3	31.7	37.5	35.7	32.7	27.6	27.9	22.6	20.6	23.7	20.4	21.6	22.0	37.5	
24	23.3	24.9	22.7	23.5	24.1	21.7	24.8	24.4	25.7	24.8	23.7	23.1	23.5	20.4	19.7	31.0	35.6	33.8	31.6	25.9	21.1	22.4	20.9	20.6	24.7	35.6	
25	21.9	21.2	24.2	22.4	21.7	20.6	20.3	19.2	19.7	21.0	22.7	21.1	20.6	20.3	20.7	21.3	17.8	13.2	16.6	21.8	28.2	24.4	22.6	25.6	21.2	28.2	
26	21.1	29.4	26.9	23.3	20.7	20.7	19.7	16.8	15.9	18.3	16.5	12.9	17.4	18.8	20.3	21.6	20.0	17.1	16.9	23.4	23.0	22.5	18.5	16.6	19.9	29.4	
27	14.2	5.6	2.1	7.5	18.8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-
29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-
30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-
31	X	X	X	X	X	X	X	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	-	-
NO.	26	26	26	26	26	25	25	25	25	24	25	25	25	25	25	25	25	25	25	25	25	25	25	25	604	81.2%	
MEAN	16.4	16.1	16.6	17.5	17.9	18.0	17.1	16.7	18.2	17.2	18.7	17.5	18.5	19.1	20.0	19.2	18.1	15.6	14.5	14.7	13.9	14.3	14.7	15.8			
MAX	35.7	36.6	46.6	52.5	55.5	53.4	51.9	43.7	44.6	29.1	50.8	33.5	31.9	36.2	40.1	36.5	35.6	33.8	31.6	30.2	34.0	27.1	34.7	31.0			



Number of Non-Zero Readings	604
Maximum 1-HR Average	37.5 KM/HR
Maximum 24-HR Average	28.8 KM/HR
Monthly Calibration	0
Standard Deviation	8.292
Operational Time	604 HRS
Operational Uptime	81.2 %
Monthly Average	16.9 KM/HR

Lagoon Wind Direction (°) – October 2023

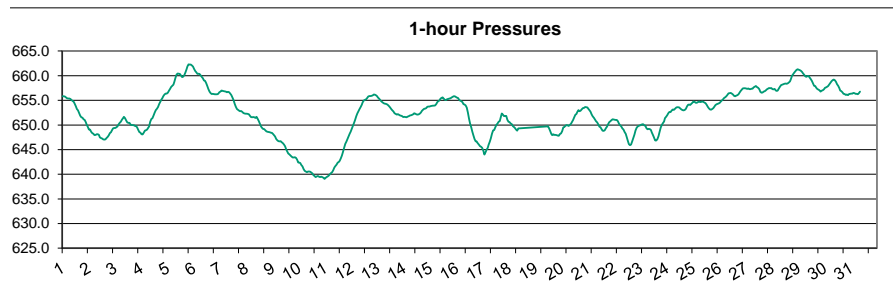
Day	HOUR																								MEAN	MAX	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	67.0	66.8	223.3	257.2	254.7	265.4	262.5	257.6	267.3	260.1	255.9	255.2	250.7	235.5	249.4	227.7	209.6	224.7	236.0	243.7	256.6	280.0	297.5	304.5	257.2	304.5	
2	295.2	298.4	303.3	299.4	292.2	294.4	307.1	300.3	296.4	294.3	270.6	240.5	235.7	233.2	251.0	246.3	246.8	249.3	252.5	262.9	270.4	190.1	158.9	236.9	270.0	307.1	
3	253.1	271.8	266.8	273.1	255.1	257.6	257.0	244.5	266.2	246.3	255.1	258.4	238.7	234.1	239.7	249.7	246.7	242.2	239.2	238.0	242.5	233.7	235.4	245.2	246.9	273.1	
4	245.5	242.4	247.5	247.8	250.4	249.4	255.8	258.5	25.3	62.6	66.7	63.5	69.9	67.3	59.4	70.9	72.5	61.6	139.5	152.4	4.0	331.2	217.9	229.8	283.5	331.2	
5	209.9	24.6	82.6	78.7	77.4	69.2	48.0	56.2	57.6	61.9	60.4	57.1	49.5	58.2	67.5	73.1	63.5	68.1	89.3	91.5	89.5	57.0	158.4	150.2	67.8	209.9	
6	241.9	280.1	292.0	278.5	274.6	296.2	293.5	295.4	305.1	293.2	278.3	265.0	261.8	262.7	247.4	239.7	248.9	253.8	273.9	271.4	273.5	275.0	276.6	302.1	276.5	305.1	
7	294.9	295.3	296.4	294.3	270.0	272.8	269.7	285.1	289.6	271.6	276.8	284.0	282.3	269.9	247.0	211.0	190.0	219.5	218.2	226.2	220.7	279.4	279.7	285.8	272.4	296.4	
8	285.4	280.2	308.5	297.4	300.9	296.6	283.9	303.8	303.9	296.4	303.8	289.5	262.0	241.9	235.1	246.4	232.4	208.2	213.4	234.5	205.4	229.8	221.5	212.3	272.6	308.5	
9	227.6	234.6	224.6	231.0	225.3	240.0	234.0	219.1	225.2	246.8	266.2	215.1	228.6	248.8	240.1	243.3	198.1	197.7	213.9	243.1	229.3	242.0	253.0	269.3	235.8	269.3	
10	234.3	228.6	229.5	253.8	257.6	256.1	253.3	253.2	249.7	248.9	249.3	253.0	250.0	256.9	260.8	260.2	261.6	289.7	268.8	193.7	99.4	256.5	268.7	257.1	253.6	289.7	
11	258.1	262.3	258.0	249.9	256.5	258.6	265.5	280.3	308.8	273.2	251.8	257.0	245.5	238.8	240.5	242.0	7.7	53.6	54.5	73.8	59.7	46.3	47.1	42.7	267.4	308.8	
12	120.2	328.1	145.0	88.8	50.4	42.1	149.5	0.4	108.0	359.8	54.1	50.7	52.9	45.3	46.1	44.8	51.6	69.8	59.4	56.4	59.9	48.8	61.5	61.7	56.4	359.8	
13	65.8	63.7	73.2	64.7	51.7	69.2	86.5	129.2	60.6	60.9	65.0	56.0	72.5	79.7	80.3	78.8	80.7	87.1	83.6	77.5	73.7	195.9	238.4	219.0	75.2	238.4	
14	246.0	244.5	244.5	247.2	234.2	220.3	222.4	231.9	256.5	256.1	274.8	272.0	242.1	233.5	233.3	242.5	237.3	234.3	212.9	227.8	244.0	250.5	228.9	189.2	241.3	274.8	
15	230.0	220.2	260.5	277.4	278.8	256.1	257.0	159.3	273.4	272.9	251.0	234.7	241.3	240.3	236.8	241.1	242.7	253.7	269.8	267.3	271.4	290.4	263.8	246.2	251.9	290.4	
16	238.0	241.8	247.6	243.1	246.2	241.8	219.7	249.1	254.4	247.1	237.6	231.1	237.1	133.9	66.2	85.8	317.4	256.2	256.5	246.8	247.1	250.1	250.9	248.2	246.2	317.4	
17	239.4	262.3	263.6	255.5	255.7	234.0	235.9	240.5	237.8	242.6	235.2	243.4	248.1	232.5	240.2	241.1	248.1	254.3	252.7	248.5	249.3	244.0	239.8	236.8	244.6	263.6	
18	233.6	243.5	246.3	245.5	246.5	249.1	248.7	254.9	247.7	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	-	-	
19	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	312.3	59.1	308.3	243.5	238.3	234.4	236.7	245.3	243.7	246.2	251.2	247.6	249.3	242.2	-	-	
20	254.1	57.9	84.0	64.1	55.6	55.6	57.7	49.2	60.2	65.3	74.1	84.9	73.1	56.5	71.1	74.7	56.7	75.3	70.2	108.3	12.7	255.6	77.6	330.2	62.0	330.2	
21	304.5	300.5	273.6	296.4	321.7	293.1	292.2	262.9	287.7	285.4	286.0	290.1	269.9	282.8	35.5	56.5	60.1	54.6	77.6	69.7	83.6	83.7	81.1	59.0	317.7	321.7	
22	65.6	76.7	70.8	64.9	67.5	77.4	73.1	70.4	59.7	57.0	138.8	225.0	139.2	142.3	46.9	57.7	67.8	66.9	58.5	66.2	60.3	66.0	61.5	110.1	70.6	225.0	
23	158.7	160.8	155.8	135.0	115.5	95.3	89.4	72.1	70.4	63.2	73.6	82.9	94.2	336.1	301.3	299.2	242.8	187.6	187.5	191.3	197.8	191.8	190.0	189.7	170.3	336.1	
24	177.8	180.7	172.1	161.0	169.0	177.6	185.1	187.2	181.2	176.4	180.1	177.5	174.0	158.4	155.0	249.7	326.0	333.7	337.4	285.4	188.3	164.7	173.9	172.3	190.2	337.4	
25	164.7	159.6	156.4	152.8	150.9	153.7	153.7	162.2	155.5	157.0	170.5	175.7	180.3	171.1	168.2	178.9	162.1	122.9	134.7	151.0	246.6	353.8	353.8	358.3	161.6	358.3	
26	332.3	291.4	212.3	171.0	160.6	164.9	158.3	159.4	161.0	135.0	93.2	160.8	151.9	151.9	149.0	155.6	161.6	163.8	161.3	170.1	163.8	152.4	150.1	163.9	332.3	332.3	
27	144.4	190.6	121.3	293.7	333.1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-
29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-
30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-
31	X	X	X	X	X	X	X	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	-	-
NO.	26	26	26	26	26	25	25	25	25	24	25	25	25	25	25	25	25	25	25	25	25	25	25	25	604	81.2%	
MEAN	214.9	211.8	210.0	212.4	209.7	203.5	206.4	199.3	200.4	206.6	200.9	188.6	194.7	194.2	176.4	181.8	178.5	178.9	184.3	185.4	172.3	209.1	201.5	214.0	-	-	
MAX	332.3	328.1	308.5	299.4	333.1	296.6	307.1	303.8	308.8	359.8	312.3	290.1	308.3	336.1	301.3	299.2	326.0	333.7	337.4	285.4	273.5	353.8	353.8	358.3	-	-	



Number of Non-Zero Readings	604
Maximum 1-HR Average	360 degrees
Maximum 24-HR Average	318 degrees
Monthly Calibration	0
Standard Deviation	85.34
Operational Time	604 HRS
Operational Uptime	81.2 %
Monthly Average	197.4 degrees

Lagoon Pressure (mmHg) – October 2023

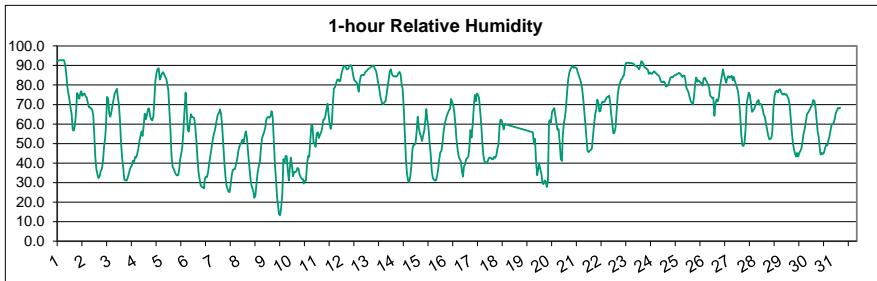
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	655.8	655.8	655.8	655.6	655.4	655.4	655.4	655.3	655.1	654.9	654.7	654.3	653.8	653.3	653.0	652.4	651.9	651.5	651.5	651.2	651.0	650.6	650.1	649.6	653.5	655.8
2	649.1	649.1	648.6	648.4	648.2	647.9	648.0	648.1	648.1	648.0	647.5	647.4	647.3	647.1	647.0	647.1	647.4	647.6	647.9	648.3	648.5	648.9	649.3	649.4	648.1	649.4
3	649.4	649.5	649.7	650.1	650.4	650.7	651.1	651.4	651.6	651.4	650.9	650.5	650.4	650.4	650.1	650.0	650.0	649.9	649.8	649.7	649.5	649.0	648.6	648.4	650.1	651.6
4	648.1	648.1	648.4	648.8	649.0	649.1	649.4	649.7	650.6	651.2	651.4	651.9	652.5	653.0	653.3	653.7	654.2	654.7	655.1	655.4	655.9	656.2	656.4	656.3	652.2	656.4
5	656.6	657.0	657.3	657.7	657.9	658.2	658.7	659.6	660.2	660.4	660.4	660.3	660.1	659.7	659.8	660.1	660.7	661.3	661.9	662.3	662.3	662.2	662.1	661.9	659.9	662.3
6	661.4	660.9	660.7	660.4	660.4	660.4	660.1	659.8	659.5	659.0	658.9	658.5	657.9	657.3	656.8	656.4	656.3	656.3	656.3	656.2	656.2	656.2	656.3	656.6	658.3	661.4
7	656.8	657.0	656.9	656.9	656.8	656.8	656.6	656.7	656.7	656.4	656.0	655.6	655.0	654.3	653.7	653.3	653.1	652.9	652.8	652.8	652.7	652.4	652.3	652.3	654.9	657.0
8	652.3	652.2	652.2	651.9	651.6	651.6	651.6	651.4	651.4	651.7	651.2	650.8	650.2	649.7	649.4	649.2	649.2	648.9	648.7	648.6	648.6	648.6	648.4	648.4	650.3	652.3
9	648.2	647.9	647.7	647.2	646.9	646.7	646.7	646.7	646.5	646.3	646.0	645.7	645.0	644.6	644.2	644.0	643.8	643.6	643.4	643.4	643.5	643.3	642.9	642.4	645.3	648.2
10	642.4	642.3	641.9	641.6	641.1	640.7	640.5	640.4	640.6	640.5	640.5	640.3	640.1	639.8	639.6	639.4	639.5	639.6	639.5	639.4	639.5	639.4	639.3	639.1	640.3	642.4
11	639.2	639.4	639.6	639.8	640.0	640.2	640.4	640.8	641.4	641.7	641.9	642.4	642.5	642.7	643.2	643.8	644.6	645.4	646.2	646.6	647.2	647.7	648.2	648.6	643.1	648.6
12	649.2	649.8	650.4	651.0	651.8	652.3	652.8	653.3	653.7	654.1	654.6	654.9	655.1	655.2	655.4	655.8	655.9	655.9	656.0	656.2	656.1	656.0	655.9	655.9	654.1	656.2
13	655.5	655.3	655.1	654.8	654.6	654.4	654.3	654.3	654.2	654.1	653.8	653.6	653.2	653.0	652.7	652.4	652.2	652.1	652.2	652.1	651.9	651.9	651.8	651.6	653.4	655.5
14	651.7	651.6	651.6	651.7	651.8	651.9	652.0	652.1	652.2	652.4	652.3	652.2	652.1	652.2	652.3	652.5	652.9	653.1	653.3	653.3	653.4	653.7	653.7	653.7	652.5	653.7
15	653.8	653.9	653.9	653.9	654.0	654.2	654.7	654.8	655.0	655.3	655.5	655.6	655.3	655.1	655.0	655.2	655.3	655.3	655.4	655.5	655.7	655.8	655.8	655.7	655.0	655.8
16	655.5	655.5	655.1	654.9	654.8	654.6	654.2	654.1	654.0	653.5	652.5	651.3	650.3	649.5	648.6	647.9	647.1	646.7	646.7	646.3	646.1	645.7	645.6	645.4	650.7	655.5
17	644.8	644.0	644.4	645.0	645.4	646.0	646.6	647.3	648.2	648.9	649.0	649.5	650.0	650.3	650.7	650.8	651.7	652.3	652.1	651.8	651.8	651.8	651.1	650.7	648.9	652.3
18	650.6	650.3	650.2	649.7	649.6	649.4	649.1	648.8	649.3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	-	-	
19	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	648.2	648.3	
20	648.8	649.5	649.6	649.8	650.0	649.9	649.8	650.0	650.2	650.6	651.0	651.5	652.1	652.2	652.7	653.0	652.8	652.9	653.2	653.4	653.5	653.7	653.6	653.5	651.6	653.7
21	653.2	653.0	652.7	652.2	651.8	651.5	651.1	650.8	650.5	650.1	649.7	649.5	649.2	648.8	648.8	648.9	649.3	649.7	650.1	650.6	650.7	651.0	651.1	651.1	650.6	653.2
22	651.1	651.0	651.0	650.8	650.2	649.9	649.7	649.3	649.1	648.6	648.2	647.6	646.8	646.1	645.9	646.0	646.7	647.4	648.0	648.9	649.7	649.8	649.9	649.9	648.8	651.1
23	650.0	650.1	650.2	650.0	649.8	649.4	649.1	649.2	649.2	649.0	648.5	648.0	647.4	646.9	646.9	647.1	647.7	648.6	649.5	650.0	650.4	650.7	651.4	651.7	649.2	651.7
24	652.0	652.4	652.6	652.6	652.9	653.1	653.1	653.3	653.5	653.6	653.6	653.5	653.3	653.2	653.0	653.0	653.1	653.3	653.8	654.1	654.2	654.1	654.3	654.5	653.3	654.5
25	654.8	654.7	654.5	654.5	654.6	654.8	654.7	654.7	654.8	654.7	654.6	654.4	654.1	653.7	653.4	653.1	653.1	653.2	653.4	653.7	654.0	654.2	654.3	654.4	654.2	654.8
26	654.5	654.8	655.0	655.2	655.5	655.6	655.9	656.1	656.4	656.4	656.5	656.6	656.4	656.2	655.9	655.8	656.0	656.1	656.2	656.6	656.9	657.2	657.5	657.4	656.1	657.5
27	657.4	657.3	657.4	657.3	657.3	657.4	657.4	657.6	657.8	657.9	657.7	657.5	657.3	656.7	656.6	656.6	656.8	656.9	657.0	657.2	657.4	657.5	657.5	657.5	657.3	657.9
28	657.3	657.2	657.3	657.0	656.9	657.0	657.4	657.8	658.1	658.2	658.3	658.4	658.4	658.3	658.4	658.6	658.9	659.3	660.0	660.3	660.6	660.9	661.2	661.3	658.6	661.3
29	661.2	661.1	661.0	660.7	660.5	660.2	659.9	659.8	659.9	660.0	659.6	659.3	658.9	658.4	658.0	657.9	657.6	657.3	657.2	657.0	656.8	657.0	657.1	657.2	658.9	661.2
30	657.5	657.6	657.8	657.9	658.2	658.5	658.8	659.1	659.2	659.1	658.7	658.3	658.0	657.5	657.0	656.9	656.6	656.3	656.3	656.1	656.2	656.0	656.3	656.3	657.5	659.2
31	656.4	656.3	656.5	656.5	656.3	656.3	656.3	656.5	656.8	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	-	-
NO.	30	30	30	30	30	30	30	30	30	28	29	29	29	29	29	29	29	29	29	29	29	29	29	29	704	94.6%
MEAN	652.5	652.5	652.5	652.5	652.5	652.5	652.5	652.6	652.8	652.8	652.5	652.4	652.1	651.9	651.7	651.7	651.8	651.9	652.1	652.3	652.3	652.4	652.4	652.4	652.5	659.2
MAX	661.4	661.1	661.0	660.7	660.5	660.4	660.1	659.8	660.2	660.4	660.4	660.3	660.1	659.7	659.8	660.1	660.7	661.3	661.9	662.3	662.3	662.2	662.1	661.9	659.9	662.3



Number of Non-Zero Readings	704
Maximum 1-HR Average	662 MMHg
Maximum 24-HR Average	660 MMHg
Operational Time	704 HRS
Monthly Calibration	0
Operational Uptime	94.6 %
Standard Deviation	4.935
Monthly Average	652.3 MMHg

Lagoon Relative Humidity (%) – October 2023

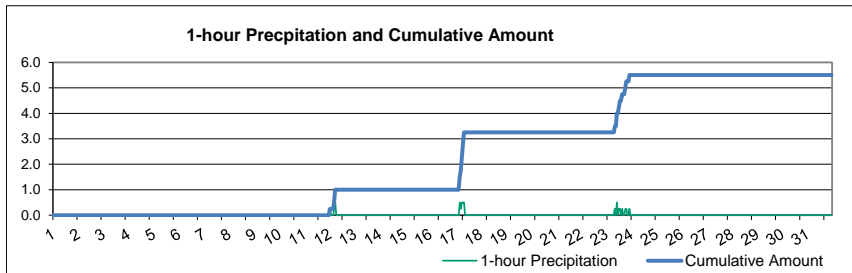
Day	HOUR																								MEAN	MAX	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	92.4	92.6	92.8	92.7	92.6	92.8	92.5	89.9	84.8	78.6	75.2	72.5	68.4	65.2	57.0	56.6	59.4	65.7	75.9	74.8	73.0	75.9	76.8	74.5	78.0	92.8	
2	75.4	75.7	74.2	73.4	71.0	68.6	68.6	67.9	67.4	64.5	55.9	43.4	37.1	34.2	32.3	33.2	36.0	36.9	40.5	48.1	52.5	58.9	73.9	73.0	56.8	75.7	
3	65.3	63.8	66.3	69.7	72.8	75.7	76.8	78.1	73.8	70.3	61.8	50.2	42.6	37.4	31.4	31.2	31.0	32.4	34.5	36.8	38.0	38.6	41.2	40.4	52.5	78.1	
4	43.2	42.9	44.8	47.4	51.4	54.1	56.2	53.9	58.6	65.4	62.5	64.4	67.6	68.1	64.0	62.4	61.9	64.2	74.3	82.5	86.2	88.3	88.6	82.7	64.0	88.6	
5	84.2	85.9	86.6	85.4	84.2	83.0	80.8	77.2	66.8	56.0	43.0	37.8	36.9	35.4	34.2	33.7	33.8	37.0	41.8	44.8	48.2	56.7	66.9	76.1	59.0	86.6	
6	67.2	57.0	56.2	61.7	65.0	63.7	63.4	63.1	58.9	51.9	42.7	35.4	31.8	28.5	27.9	27.6	27.1	32.0	33.0	32.9	35.5	40.1	43.7	47.3	45.6	67.2	
7	51.4	54.4	56.5	59.3	62.1	64.8	65.5	67.5	65.4	59.0	49.9	40.7	33.3	28.4	26.6	25.3	25.2	29.0	34.0	36.6	36.8	37.0	39.8	42.1	45.4	67.5	
8	46.3	48.5	49.7	50.6	52.0	50.6	53.7	56.2	53.3	46.2	39.8	33.5	29.1	27.2	25.2	22.3	23.3	29.3	35.1	38.1	40.3	47.1	52.6	54.4	41.9	56.2	
9	56.0	58.0	62.0	63.3	63.6	63.3	64.0	66.6	63.7	51.9	39.8	31.9	22.8	17.8	13.8	13.3	17.6	24.1	42.0	40.3	43.7	43.6	36.3	31.0	42.9	66.6	
10	38.4	42.8	38.8	33.3	35.5	35.3	35.8	37.5	37.2	34.0	32.8	32.0	31.9	29.5	30.9	31.0	39.3	43.6	43.2	51.6	59.4	58.9	50.1	50.5	39.7	59.4	
11	48.3	55.1	55.8	52.9	54.5	55.7	57.6	62.2	62.4	64.2	67.6	70.4	65.7	60.3	57.5	60.0	70.4	78.3	78.9	80.9	82.8	82.8	81.9	82.2	66.2	82.8	
12	85.6	87.8	89.3	89.8	89.1	87.9	88.3	89.4	90.1	90.1	88.4	84.8	82.5	81.9	81.5	80.1	76.6	81.6	84.8	85.2	84.9	85.2	86.4	87.0	85.8	90.1	
13	87.4	88.3	88.6	89.1	89.3	89.8	89.9	88.2	87.5	85.2	81.8	79.0	75.0	72.3	70.4	70.2	71.3	71.8	75.5	79.7	83.2	86.9	88.0	85.7	82.2	89.9	
14	84.7	84.3	84.6	84.3	84.8	86.2	86.6	85.3	80.8	78.0	68.4	55.0	42.2	34.6	31.0	30.3	33.3	38.7	47.2	49.4	49.4	50.1	56.2	63.7	62.0	86.6	
15	58.1	55.1	53.5	51.3	54.4	56.8	62.2	67.7	62.2	58.4	50.9	44.9	36.3	32.4	31.6	31.0	31.4	33.8	37.4	41.7	45.5	46.2	50.0	55.8	47.8	67.7	
16	59.8	62.3	64.2	65.6	67.1	67.9	72.9	71.5	69.6	66.3	60.2	52.2	47.3	43.7	42.0	41.1	35.8	33.2	38.2	39.3	41.8	42.6	43.2	47.7	53.1	72.9	
17	57.0	53.1	59.4	68.3	74.9	71.7	75.6	75.0	73.4	67.1	60.4	50.7	44.1	40.8	40.3	40.2	41.0	42.4	42.9	42.6	42.0	41.9	43.3	42.7	53.8	75.6	
18	43.8	47.3	49.4	58.9	62.2	62.1	60.1	57.2	59.9	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	-	-	
19	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	55.8	49.9	52.4	40.5	33.8	36.6	39.8	36.8	34.8	29.9	29.3	31.1	30.7	27.7	-	-
20	30.6	61.0	62.0	60.9	66.2	67.3	68.1	64.3	60.5	57.1	57.4	50.3	42.1	41.1	53.8	60.5	63.6	68.8	76.8	83.1	86.3	88.0	89.0	90.0	64.5	90.0	
21	88.8	89.1	88.9	88.5	86.2	84.7	82.9	81.0	77.5	72.3	65.6	59.1	53.1	46.3	45.6	46.4	46.6	47.6	53.8	59.6	65.0	67.5	72.5	70.7	68.3	89.1	
22	66.4	66.6	70.3	71.5	71.3	71.5	72.9	73.8	74.0	74.6	70.9	65.2	60.7	55.2	55.5	58.1	66.4	74.7	78.9	80.7	82.7	83.1	84.7	85.0	71.4	85.0	
23	90.2	91.4	91.4	91.3	91.1	91.3	91.1	91.0	90.7	89.8	89.8	89.6	88.8	88.0	89.5	92.1	91.6	90.7	88.9	88.8	88.2	87.8	85.7	86.4	89.8	92.1	
24	85.9	85.6	86.5	87.0	86.4	85.7	85.2	84.9	83.9	82.2	81.4	81.5	81.9	80.9	79.3	79.4	80.0	81.8	83.7	84.2	83.9	84.6	85.0	85.0	83.6	87.0	
25	85.6	85.6	86.2	85.8	85.1	84.1	84.6	84.9	82.9	78.6	77.5	76.1	73.6	71.6	71.0	70.1	74.3	80.6	83.9	81.8	82.4	82.1	81.2	81.1	80.4	86.2	
26	79.7	83.4	83.7	82.5	81.6	80.1	78.8	74.8	74.0	73.3	73.6	64.3	70.4	72.6	71.6	73.6	78.8	82.2	85.0	88.0	85.6	83.0	81.2	83.6	78.6	88.0	
27	84.6	83.7	84.2	84.8	82.4	84.1	82.2	80.4	78.7	76.8	71.8	64.5	54.5	49.2	48.7	50.8	58.3	70.8	73.1	76.1	75.0	71.0	66.2	67.0	71.6	84.8	
28	67.8	69.3	70.4	71.9	72.3	69.8	70.4	69.8	67.4	64.7	63.7	59.9	57.1	54.1	52.2	52.4	53.2	56.3	68.6	74.5	76.5	77.1	76.1	77.5	66.4	77.5	
29	77.8	76.3	75.3	75.1	75.6	75.0	75.3	74.1	73.0	69.6	63.0	56.0	50.1	47.1	44.6	43.3	45.2	43.3	45.2	46.3	47.6	51.2	55.2	57.7	60.1	77.8	
30	61.2	64.9	65.8	66.5	67.7	68.8	70.1	72.3	71.8	68.7	62.4	56.0	53.3	47.0	44.4	45.1	44.7	45.3	47.7	49.3	49.1	51.7	53.6	56.8	57.7	72.3	
31	59.8	60.0	60.5	62.6	65.6	67.0	68.3	67.9	68.4	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	NRM	-	-	
NO.	30	30	30	30	30	30	30	30	30	28	29	29	29	29	29	29	29	29	29	29	29	29	29	29	704	94.6%	
MEAN	67.4	69.1	69.9	70.8	71.9	72.0	72.7	72.4	70.6	67.7	62.5	56.9	52.8	49.4	47.9	48.2	50.2	53.5	57.9	60.3	61.9	63.4	64.8	65.7			
MAX	92.4	92.6	92.8	92.7	92.6	92.8	92.5	91.0	90.7	90.1	89.8	89.6	88.8	88.0	89.5	92.1	91.6	90.7	88.9	88.8	88.2	88.3	89.0	90.0			



Number of Non-Zero Readings	704
Maximum 1-HR Average	92.8 %
Maximum 24-HR Average	89.8 %
Monthly Calibration	0
Standard Deviation	18.86
Operational Time	704 HRS
Operational Uptime	94.6 %
Monthly Average	62.6 %

Lagoon Precipitation (mm) – October 2023

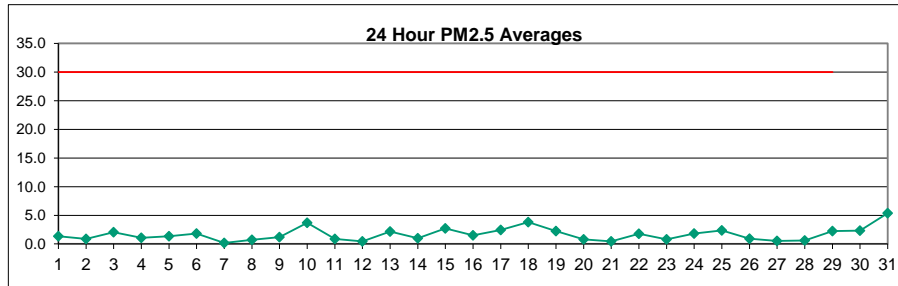
Day	HOUR																								DAILY MAX	24-HOUR TOTAL	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.3	0.0	0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.5	0.3	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.5	0.0	0.3	0.3	0.0	0.3	0.0	0.0	0.3	0.3	0.0	0.0	0.3	0.0	0.3	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NO.	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
MEAN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAX	0.3	0.0	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.0	0.5	0.0	0.3	0.3	0.0	0.3	0.0	0.0	0.3	0.3	0.0	0.0	0.3	0.0	0.3	0.0	0.0



Number of Non-Zero Readings	16	
Maximum 1-HR Average	2.3 MM	
Maximum 24-HR Average	0.5 MM	
Monthly Calibration	0	Operational Time
Standard Deviation	0.053	Operational Uptime
		Monthly Average
		744 HRS
		100.0 %
		0.01 MM

Windridge PM_{2.5} (µg/m³) – October 2023

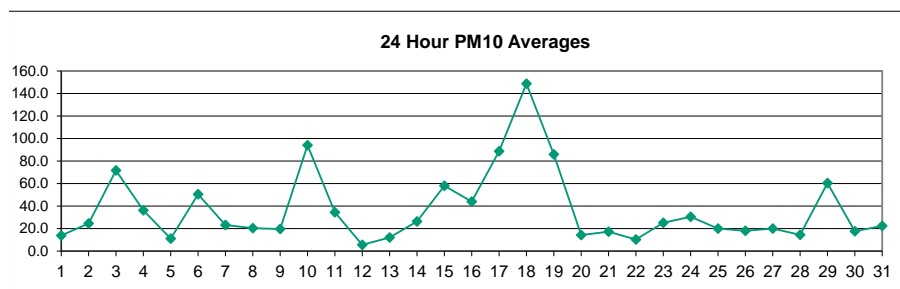
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	4.0	3.0	2.0	3.0	3.0	3.0	4.0	4.0	3.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	4.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	4.0	4.0	1.0	3.0	4.0	1.0	1.0	1.0	0.0	0.0	0.0	0.9	4.0
3	1.0	2.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	3.0	3.0	3.0	5.0	4.0	3.0	3.0	6.0	5.0	1.0	2.0	6.0	2.0	6.0
4	4.0	0.0	0.0	0.0	1.0	2.0	3.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	5.0	2.0	2.0	1.0	0.0	0.0	1.1	5.0
5	2.0	4.0	3.0	0.0	5.0	3.0	3.0	4.0	2.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.0	1.0	1.3	5.0
6	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	1.0	5.0	11.0	8.0	5.0	4.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	11.0
7	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.2	1.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	1.0	0.0	2.0	3.0	3.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.7	3.0
9	3.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	2.0	0.0	0.0	4.0	7.0	5.0	2.0	1.2	7.0
10	5.0	5.0	3.0	13.0	8.0	10.0	6.0	6.0	10.0	5.0	5.0	4.0	4.0	2.0	0.0	0.0	1.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	3.7	13.0
11	0.0	2.0	2.0	7.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.0	1.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	7.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	1.0	1.0	1.0	0.5	2.0
13	2.0	5.0	3.0	5.0	4.0	6.0	5.0	2.0	2.0	3.0	3.0	3.0	2.0	1.0	1.0	0.0	0.0	1.0	2.0	2.0	0.0	0.0	0.0	0.0	2.2	6.0
14	1.0	3.0	0.0	0.0	4.0	2.0	0.0	1.0	1.0	0.0	0.0	0.0	7.0	2.0	0.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	7.0
15	0.0	0.0	0.0	9.0	7.0	1.0	0.0	0.0	0.0	4.0	6.0	7.0	3.0	6.0	4.0	5.0	6.0	5.0	2.0	0.0	0.0	0.0	0.0	0.0	2.7	9.0
16	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	2.0	1.0	1.0	3.0	6.0	6.0	6.0	3.0	1.0	5.0	4.0	1.0	1.5	6.0
17	3.0	7.0	5.0	2.0	0.0	0.0	2.0	1.0	0.0	1.0	2.0	0.0	4.0	7.0	3.0	0.0	3.0	1.0	0.0	2.0	3.0	3.0	5.0	5.0	2.5	7.0
18	5.0	2.0	1.0	10.0	10.0	6.0	6.0	5.0	4.0	6.0	6.0	4.0	3.0	6.0	4.0	2.0	4.0	6.0	1.0	0.0	0.0	0.0	0.0	0.0	3.8	10.0
19	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	2.0	1.0	6.0	8.0	5.0	2.0	3.0	3.0	6.0	4.0	3.0	3.0	4.0	2.3	8.0
20	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	4.0	1.0	0.0	2.0	1.0	2.0	3.0	1.0	0.8	4.0
21	0.0	0.0	0.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.0	0.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.5	2.0
22	0.0	1.0	2.0	1.0	0.0	3.0	0.0	0.0	0.0	0.0	1.0	4.0	5.0	2.0	2.0	2.0	0.0	1.0	5.0	4.0	1.0	2.0	4.0	3.0	1.8	5.0
23	5.0	5.0	4.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	0.0	0.8	5.0
24	0.0	0.0	2.0	2.0	2.0	1.0	0.0	1.0	1.0	1.0	3.0	2.0	3.0	2.0	0.0	0.0	0.0	4.0	2.0	0.0	3.0	7.0	5.0	3.0	1.8	7.0
25	4.0	3.0	2.0	4.0	3.0	0.0	1.0	2.0	2.0	1.0	0.0	1.0	3.0	3.0	1.0	1.0	3.0	5.0	5.0	3.0	3.0	4.0	3.0	0.0	2.4	5.0
26	0.0	3.0	2.0	0.0	0.0	5.0	3.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	3.0	0.0	0.0	2.0	0.0	0.0	0.9	5.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	1.0	1.0	4.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.5	4.0
28	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	3.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	4.0	2.0	0.6	4.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	1.0	4.0	4.0	6.0	3.0	4.0	4.0	6.0	6.0	3.0	5.0	4.0	2.3	6.0
30	4.0	2.0	0.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	1.0	C	8.0	6.0	4.0	3.0	1.0	1.0	3.0	3.0	2.0	2.0	4.0	5.0	2.3	8.0
31	X	5.0	6.0	4.0	3.0	3.0	5.0	4.0	3.0	2.0	3.0	7.0	7.0	5.0	13.0	10.0	6.0	3.0	3.0	9.0	7.0	5.0	7.0	4.0	5.4	13.0
NO.	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	742	99.9%
MEAN	1.6	1.7	1.2	2.1	1.9	1.5	1.3	1.2	1.2	1.1	1.3	1.5	2.3	2.6	2.0	1.8	1.9	1.7	1.6	1.8	1.5	1.6	1.9	1.4	7.5	
MAX	5.0	7.0	6.0	13.0	10.0	10.0	6.0	6.0	10.0	6.0	6.0	7.0	11.0	8.0	13.0	10.0	6.0	6.0	6.0	9.0	7.0	7.0	7.0	6.0	17.4	70.0



Number of 24HR Exceedences	0	Proposed Guideline	
Number of Non-Zero Readings	394		
Maximum 1-HR Average	13.0 UG/M3		
Maximum 24-HR Average	5.4 UG/M3		
Operational Time	743 HRS		
Monthly Calibration	1	Operational Uptime	99.9 %
Standard Deviation	2.2	Monthly Average	1.7 UG/M3

Windridge PM₁₀ (µg/m³) – October 2023

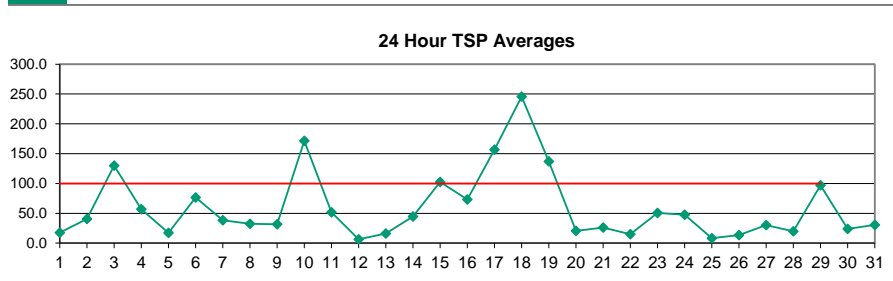
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	5.0	8.0	13.0	7.0	3.0	11.0	12.0	8.0	8.0	19.0	65.0	40.0	44.0	36.0	22.0	19.0	6.0	3.0	1.0	1.0	0.0	0.0	1.0	2.0	13.9	65.0
2	1.0	0.0	0.0	2.0	4.0	3.0	3.0	4.0	4.0	11.0	49.0	83.0	55.0	64.0	72.0	65.0	60.0	58.0	12.0	15.0	7.0	6.0	7.0	5.0	24.6	83.0
3	2.0	1.0	3.0	3.0	2.0	2.0	4.0	21.0	25.0	42.0	36.0	72.0	75.0	50.0	114.0	146.0	132.0	146.0	84.0	109.0	89.0	75.0	248.0	240.0	71.7	248.0
4	94.0	54.0	72.0	76.0	56.0	127.0	129.0	78.0	50.0	9.0	8.0	11.0	7.0	5.0	2.0	2.0	4.0	6.0	4.0	6.0	4.0	38.0	22.0	36.2	129.0	
5	27.0	14.0	17.0	14.0	21.0	12.0	8.0	6.0	10.0	10.0	8.0	6.0	7.0	9.0	15.0	14.0	13.0	11.0	11.0	9.0	5.0	11.0	7.0	3.0	11.2	27.0
6	26.0	27.0	12.0	27.0	10.0	9.0	16.0	17.0	52.0	28.0	56.0	209.0	232.0	144.0	130.0	71.0	75.0	5.0	7.0	13.0	7.0	18.0	15.0	8.0	50.6	232.0
7	8.0	18.0	1.0	2.0	1.0	3.0	4.0	2.0	7.0	15.0	17.0	8.0	74.0	63.0	133.0	71.0	8.0	5.0	6.0	5.0	5.0	64.0	24.0	11.0	23.1	133.0
8	8.0	10.0	6.0	4.0	7.0	6.0	3.0	1.0	26.0	9.0	6.0	10.0	77.0	37.0	56.0	98.0	52.0	33.0	3.0	17.0	3.0	5.0	6.0	6.0	20.4	98.0
9	8.0	6.0	6.0	6.0	5.0	4.0	6.0	4.0	7.0	5.0	5.0	7.0	6.0	24.0	56.0	22.0	17.0	2.0	4.0	31.0	40.0	85.0	88.0	26.0	19.6	88.0
10	36.0	29.0	42.0	262.0	288.0	261.0	132.0	184.0	189.0	102.0	92.0	63.0	81.0	51.0	88.0	70.0	84.0	31.0	34.0	8.0	7.0	35.0	11.0	77.0	94.0	288.0
11	123.0	43.0	32.0	59.0	59.0	53.0	54.0	26.0	10.0	41.0	86.0	49.0	55.0	40.0	33.0	35.0	17.0	1.0	1.0	4.0	4.0	3.0	2.0	0.0	34.6	123.0
12	0.0	3.0	2.0	5.0	5.0	1.0	2.0	3.0	4.0	12.0	11.0	6.0	0.0	1.0	1.0	0.0	3.0	16.0	11.0	8.0	14.0	9.0	8.0	9.0	5.6	16.0
13	11.0	10.0	10.0	13.0	17.0	18.0	23.0	8.0	41.0	29.0	15.0	12.0	15.0	11.0	6.0	2.0	7.0	7.0	8.0	13.0	6.0	3.0	2.0	5.0	12.2	41.0
14	8.0	29.0	6.0	19.0	40.0	24.0	6.0	3.0	4.0	16.0	25.0	22.0	65.0	32.0	29.0	133.0	78.0	48.0	15.0	8.0	8.0	7.0	5.0	2.0	26.3	133.0
15	8.0	17.0	7.0	66.0	35.0	3.0	3.0	4.0	34.0	86.0	109.0	61.0	126.0	142.0	80.0	176.0	125.0	183.0	100.0	29.0	0.0	1.0	0.0	0.0	58.1	183.0
16	2.0	5.0	9.0	8.0	5.0	0.0	0.0	26.0	65.0	34.0	36.0	22.0	12.0	44.0	28.0	33.0	62.0	238.0	97.0	67.0	55.0	81.0	75.0	54.0	44.1	238.0
17	133.0	126.0	43.0	65.0	24.0	24.0	51.0	43.0	39.0	64.0	111.0	81.0	102.0	86.0	90.0	94.0	141.0	90.0	129.0	116.0	63.0	98.0	137.0	177.0	88.6	177.0
18	78.0	88.0	198.0	382.0	283.0	222.0	244.0	323.0	232.0	172.0	215.0	137.0	102.0	95.0	108.0	136.0	120.0	82.0	51.0	77.0	29.0	72.0	89.0	33.0	148.7	382.0
19	25.0	30.0	6.0	2.0	3.0	30.0	4.0	7.0	10.0	32.0	101.0	87.0	117.0	166.0	151.0	236.0	63.0	145.0	176.0	171.0	97.0	197.0	131.0	76.0	86.0	236.0
20	16.0	35.0	4.0	3.0	2.0	6.0	6.0	5.0	22.0	52.0	24.0	13.0	12.0	9.0	12.0	12.0	14.0	21.0	16.0	10.0	13.0	12.0	14.0	9.0	14.3	52.0
21	24.0	10.0	11.0	6.0	4.0	41.0	25.0	7.0	7.0	17.0	15.0	11.0	91.0	55.0	13.0	14.0	24.0	4.0	7.0	12.0	9.0	5.0	2.0	1.0	17.3	91.0
22	5.0	6.0	6.0	6.0	3.0	3.0	5.0	4.0	10.0	6.0	12.0	26.0	25.0	16.0	23.0	10.0	16.0	10.0	13.0	10.0	10.0	11.0	9.0	6.0	10.5	26.0
23	9.0	6.0	4.0	1.0	1.0	2.0	1.0	4.0	5.0	11.0	37.0	21.0	13.0	67.0	82.0	10.0	31.0	81.0	69.0	42.0	18.0	26.0	26.0	40.0	25.3	82.0
24	38.0	37.0	43.0	49.0	21.0	20.0	33.0	18.0	34.0	62.0	63.0	42.0	21.0	19.0	18.0	36.0	26.0	48.0	20.0	20.0	28.0	18.0	10.0	11.0	30.6	63.0
25	6.0	5.0	6.0	8.0	6.0	10.0	7.0	9.0	13.0	22.0	26.0	61.0	70.0	69.0	46.0	24.0	18.0	17.0	8.0	8.0	8.0	22.0	4.0	8.0	20.0	70.0
26	10.0	12.0	8.0	7.0	6.0	9.0	7.0	13.0	10.0	26.0	18.0	10.0	8.0	8.0	8.0	35.0	26.0	24.0	22.0	76.0	26.0	31.0	13.0	22.0	18.1	76.0
27	16.0	4.0	5.0	4.0	5.0	4.0	6.0	9.0	37.0	90.0	33.0	26.0	76.0	45.0	1.0	13.0	44.0	0.0	2.0	4.0	20.0	12.0	11.0	13.0	20.0	90.0
28	20.0	11.0	20.0	18.0	25.0	53.0	31.0	8.0	14.0	29.0	24.0	10.0	8.0	9.0	16.0	16.0	9.0	5.0	3.0	0.0	0.0	3.0	10.0	8.0	14.6	53.0
29	6.0	7.0	4.0	1.0	2.0	21.0	18.0	8.0	55.0	15.0	50.0	26.0	55.0	96.0	41.0	59.0	27.0	96.0	150.0	217.0	176.0	145.0	155.0	20.0	60.4	217.0
30	22.0	8.0	23.0	10.0	8.0	6.0	5.0	10.0	9.0	29.0	19.0	C	C	49.0	34.0	14.0	19.0	22.0	11.0	20.0	21.0	24.0	14.0	11.0	17.6	49.0
31	8.0	12.0	32.0	33.0	17.0	41.0	24.0	11.0	12.0	14.0	34.0	62.0	64.0	55.0	22.0	18.0	12.0	11.0	8.0	10.0	11.0	12.0	10.0	7.0	22.5	64.0
NO.	31	31	31	31	31	31	31	31	31	31	31	30	30	31	31	31	31	31	31	31	31	31	31	31	742	100.0%
MEAN	25.3	21.6	21.0	37.7	31.2	33.2	28.1	28.2	33.7	35.8	45.4	43.1	56.5	51.5	49.5	54.3	42.9	46.7	35.0	36.6	25.3	35.3	37.8	29.4	42.0	
MAX	133.0	126.0	198.0	382.0	288.0	261.0	244.0	323.0	232.0	172.0	215.0	209.0	232.0	166.0	151.0	236.0	141.0	238.0	176.0	217.0	176.0	197.0	248.0	240.0	91.1	433.3



Number of Non-Zero Readings	726		
Maximum 1-HR Average	382.0 UG/M3		
Maximum 24-HR Average	148.7 UG/M3		
Operational Time	744 HRS		
Monthly Calibration	2	Operational Uptime	100.0 %
Standard Deviation	51.26	Monthly Average	36.8 UG/M3

Windridge TSP ($\mu\text{g}/\text{m}^3$) – October 2023

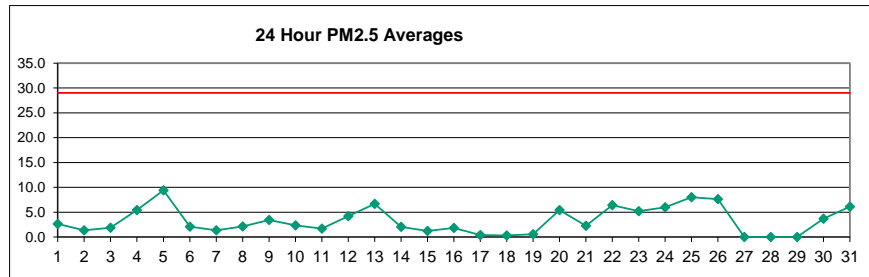
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	8.0	6.0	8.0	10.0	11.0	10.0	8.0	9.0	9.0	17.0	80.0	53.0	44.0	64.0	26.0	30.0	13.0	5.0	0.0	1.0	1.0	2.0	5.0	1.0	17.5	80.0
2	0.0	2.0	0.0	0.0	3.0	4.0	1.0	1.0	0.0	15.0	77.0	151.0	87.0	108.0	143.0	103.0	99.0	108.0	29.0	16.0	4.0	2.0	15.0	8.0	40.7	151.0
3	3.0	1.0	1.0	3.0	3.0	6.0	9.0	27.0	45.0	73.0	63.0	108.0	126.0	83.0	204.0	274.0	221.0	263.0	176.0	201.0	161.0	148.0	472.0	445.0	129.8	472.0
4	178.0	98.0	102.0	115.0	74.0	178.0	198.0	123.0	86.0	13.0	10.0	18.0	13.0	11.0	7.0	8.0	7.0	9.0	9.0	5.0	6.0	5.0	63.0	31.0	57.0	198.0
5	49.0	19.0	18.0	26.0	28.0	17.0	8.0	10.0	14.0	11.0	17.0	13.0	10.0	13.0	27.0	20.0	22.0	11.0	16.0	15.0	14.0	17.0	7.0	12.0	17.3	49.0
6	43.0	31.0	14.0	25.0	13.0	8.0	5.0	12.0	21.0	41.0	101.0	328.0	379.0	225.0	229.0	123.0	122.0	11.0	12.0	10.0	12.0	22.0	35.0	15.0	76.5	379.0
7	8.0	7.0	5.0	3.0	2.0	6.0	8.0	5.0	5.0	23.0	28.0	14.0	113.0	106.0	201.0	130.0	29.0	8.0	19.0	6.0	12.0	114.0	55.0	13.0	38.3	201.0
8	12.0	17.0	7.0	8.0	11.0	8.0	3.0	2.0	11.0	11.0	9.0	21.0	122.0	53.0	87.0	173.0	100.0	65.0	11.0	26.0	5.0	5.0	7.0	5.0	32.5	173.0
9	6.0	8.0	6.0	5.0	6.0	4.0	0.0	0.0	2.0	4.0	5.0	7.0	22.0	42.0	119.0	45.0	47.0	11.0	9.0	57.0	56.0	120.0	140.0	38.0	31.6	140.0
10	65.0	38.0	64.0	550.0	490.0	491.0	245.0	360.0	370.0	177.0	167.0	109.0	156.0	92.0	146.0	116.0	151.0	54.0	68.0	6.0	16.0	69.0	16.0	102.0	171.6	550.0
11	148.0	50.0	34.0	87.0	100.0	101.0	96.0	36.0	14.0	63.0	136.0	59.0	73.0	64.0	62.0	57.0	43.0	4.0	3.0	5.0	6.0	3.0	0.0	0.0	51.8	148.0
12	0.0	1.0	3.0	4.0	3.0	2.0	2.0	1.0	3.0	14.0	26.0	0.0	3.0	3.0	0.0	6.0	4.0	22.0	19.0	5.0	12.0	8.0	5.0	10.0	6.5	26.0
13	11.0	12.0	7.0	11.0	20.0	19.0	33.0	16.0	59.0	41.0	19.0	11.0	11.0	12.0	7.0	6.0	17.0	14.0	13.0	17.0	9.0	6.0	11.0	8.0	16.3	59.0
14	10.0	29.0	10.0	27.0	47.0	45.0	11.0	6.0	9.0	27.0	45.0	41.0	119.0	59.0	43.0	218.0	151.0	98.0	30.0	24.0	8.0	8.0	7.0	3.0	44.8	218.0
15	10.0	36.0	6.0	72.0	43.0	6.0	12.0	7.0	70.0	132.0	189.0	96.0	267.0	307.0	156.0	281.0	218.0	307.0	179.0	48.0	4.0	3.0	5.0	6.0	102.5	307.0
16	5.0	4.0	10.0	6.0	5.0	3.0	3.0	49.0	92.0	57.0	51.0	37.0	17.0	83.0	40.0	51.0	124.0	343.0	180.0	110.0	105.0	142.0	149.0	94.0	73.3	343.0
17	265.0	210.0	66.0	100.0	26.0	37.0	71.0	64.0	50.0	109.0	172.0	147.0	158.0	156.0	173.0	204.0	252.0	151.0	205.0	233.0	120.0	195.0	308.0	292.0	156.8	308.0
18	146.0	182.0	404.0	670.0	454.0	380.0	436.0	453.0	379.0	289.0	365.0	197.0	162.0	148.0	178.0	224.0	206.0	109.0	68.0	105.0	38.0	115.0	138.0	47.0	245.5	670.0
19	29.0	27.0	8.0	3.0	1.0	48.0	12.0	14.0	10.0	10.0	55.0	153.0	119.0	183.0	288.0	295.0	159.0	96.0	259.0	303.0	314.0	138.0	414.0	214.0	136.9	414.0
20	24.0	36.0	1.0	3.0	2.0	2.0	7.0	5.0	24.0	75.0	39.0	24.0	26.0	8.0	24.0	19.0	19.0	38.0	23.0	16.0	20.0	20.0	29.0	11.0	20.6	75.0
21	31.0	16.0	16.0	3.0	8.0	54.0	32.0	6.0	12.0	16.0	32.0	17.0	149.0	90.0	21.0	23.0	34.0	10.0	18.0	12.0	12.0	8.0	3.0	7.0	26.3	149.0
22	9.0	7.0	13.0	9.0	7.0	5.0	7.0	12.0	8.0	8.0	18.0	35.0	49.0	28.0	33.0	16.0	24.0	11.0	12.0	14.0	11.0	8.0	10.0	7.0	15.0	49.0
23	9.0	6.0	7.0	4.0	2.0	2.0	2.0	19.0	18.0	21.0	49.0	17.0	8.0	39.0	85.0	40.0	65.0	161.0	173.0	123.0	48.0	144.0	79.0	94.0	50.6	173.0
24	91.0	91.0	73.0	67.0	67.0	26.0	49.0	29.0	49.0	68.0	59.0	73.0	71.0	74.0	19.0	46.0	44.0	36.0	18.0	13.0	26.0	21.0	16.0	16.0	47.6	7.0
25	8.0	11.0	8.0	14.0	12.0	6.0	6.0	6.0	6.0	6.0	10.0	15.0	9.0	9.0	11.0	7.0	8.0	18.0	8.0	7.0	6.0	3.0	2.0	7.0	8.5	18.0
26	6.0	16.0	7.0	4.0	6.0	9.0	6.0	6.0	5.0	21.0	19.0	4.0	18.0	8.0	7.0	22.0	10.0	7.0	7.0	40.0	28.0	28.0	8.0	30.0	13.4	40.0
27	22.0	14.0	11.0	6.0	2.0	3.0	5.0	20.0	54.0	140.0	59.0	50.0	132.0	81.0	13.0	28.0	45.0	3.0	3.0	5.0	5.0	3.0	4.0	13.0	30.0	140.0
28	13.0	11.0	26.0	39.0	38.0	74.0	34.0	6.0	9.0	25.0	17.0	20.0	13.0	15.0	27.0	38.0	13.0	7.0	3.0	5.0	3.0	13.0	13.0	10.0	19.7	74.0
29	7.0	4.0	2.0	0.0	1.0	4.0	6.0	5.0	24.0	15.0	83.0	40.0	89.0	152.0	58.0	99.0	53.0	161.0	289.0	477.0	343.0	234.0	145.0	32.0	96.8	477.0
30	32.0	10.0	23.0	11.0	8.0	6.0	18.0	15.0	12.0	12.0	21.0	C	C	66.0	47.0	27.0	24.0	36.0	25.0	25.0	31.0	38.0	22.0	15.0	23.8	66.0
31	19.0	24.0	48.0	43.0	24.0	59.0	27.0	15.0	11.0	16.0	47.0	89.0	99.0	81.0	25.0	20.0	20.0	14.0	12.0	8.0	8.0	8.0	7.0	9.0	30.5	99.0
NO.	31	31	31	31	31	31	31	31	31	31	31	30	30	31	31	31	31	31	31	31	31	31	31	31	742	100.0%
MEAN	40.9	33.0	32.5	62.2	48.9	52.4	43.9	43.2	47.8	51.5	69.9	63.8	90.9	82.8	81.1	84.3	73.6	75.9	62.6	62.9	40.9	62.1	64.2	49.2		
MAX	265.0	210.0	404.0	670.0	490.0	491.0	436.0	453.0	379.0	289.0	365.0	328.0	379.0	307.0	295.0	281.0	252.0	343.0	303.0	477.0	343.0	414.0	472.0	445.0		



Number of 24HR Exceedences	6	Proposed Guideline
Number of Non-Zero Readings	729	
Maximum 1-HR Average	670.0 UG/M3	
Maximum 24-HR Average	245.5 UG/M3	
Izs Calibration Time		Operational Time 744 HRS
Down Time	0	Operational Uptime 100.0 %
Standard Deviation	90.5	Monthly Average 59.1 UG/M3

West PM_{2.5} (µg/m³) – October 2023

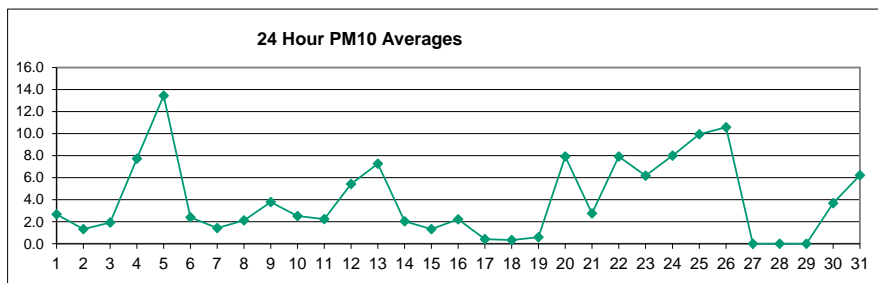
Day	HOUR																								MEAN	MAX	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	4.2	4.2	3.9	4.0	4.6	4.4	4.5	4.3	3.9	5.1	3.2	2.8	2.3	1.8	1.2	1.1	0.7	0.8	0.8	1.5	1.6	1.2	1.3	1.0	2.7	5.1	
2	1.0	1.0	0.9	1.1	1.2	1.1	1.3	1.6	1.5	1.5	1.2	1.5	0.9	0.7	1.0	0.7	0.9	0.9	0.9	1.4	2.0	2.2	2.9	2.7	1.3	2.9	
3	2.3	2.1	1.9	2.0	2.1	2.1	2.7	3.5	4.2	3.3	2.7	1.8	1.6	1.4	0.8	1.2	1.2	0.9	1.0	1.0	1.0	1.3	1.1	1.7	1.9	4.2	
4	0.9	0.8	0.6	0.5	0.5	0.4	0.6	0.6	7.2	6.3	4.7	11.1	8.5	14.4	19.6	11.1	8.2	6.1	5.6	7.6	5.1	3.8	2.4	3.4	5.4	19.6	
5	3.1	4.7	7.2	7.2	8.8	8.4	8.8	9.8	14.3	13.4	15.9	17.3	17.4	15.3	12.6	7.5	10.2	10.1	2.5	2.6	3.3	7.9	13.0	4.6	9.4	17.4	
6	3.2	3.7	3.5	3.4	2.7	2.3	2.7	3.0	3.4	2.3	2.4	1.2	1.3	1.1	1.2	1.0	0.7	2.3	1.7	2.4	1.5	1.1	1.0	1.1	2.1	3.7	
7	1.2	1.3	1.6	1.2	1.2	1.3	1.4	1.5	1.3	1.5	1.2	1.2	0.9	0.8	0.9	0.8	0.7	1.5	2.1	2.7	1.8	1.8	1.7	1.5	1.4	2.7	
8	1.8	1.7	1.3	1.6	1.8	1.6	1.6	1.6	2.1	1.7	1.5	1.5	1.3	1.5	1.2	1.3	1.4	2.0	2.5	3.3	4.6	4.1	3.9	3.9	2.1	4.6	
9	3.2	2.9	3.4	3.1	2.9	3.1	2.8	3.1	3.0	3.6	3.3	2.9	2.0	1.6	1.3	1.5	1.4	9.6	5.4	4.3	4.4	4.5	4.2	4.9	3.4	9.6	
10	4.2	4.1	3.9	3.8	3.1	2.8	2.7	2.6	1.7	1.3	1.9	1.5	1.6	2.1	2.5	2.8	2.3	1.2	1.5	2.2	2.3	1.6	1.6	0.8	2.3	4.2	
11	0.6	0.9	0.6	0.4	0.4	0.3	0.3	0.4	0.9	0.8	0.6	0.5	0.5	0.4	0.5	0.5	0.4	5.3	5.2	1.4	2.3	5.2	7.0	5.5	1.7	7.0	
12	1.8	0.3	0.5	0.8	2.9	1.2	0.9	1.1	1.7	1.4	2.5	3.5	4.7	9.7	11.9	10.9	4.6	2.1	2.6	5.0	4.9	8.7	7.8	9.7	4.2	11.9	
13	6.7	7.3	8.3	10.4	14.4	12.0	7.4	4.7	10.1	11.6	10.8	9.4	7.5	5.5	5.4	4.2	3.3	1.9	2.0	3.3	3.8	5.0	2.5	2.9	6.7	14.4	
14	3.4	3.3	2.9	2.6	2.3	2.3	2.4	2.5	2.3	2.6	2.3	1.9	1.4	1.2	0.9	1.2	0.9	1.1	1.5	1.9	2.3	1.7	2.3	1.9	2.0	3.4	
15	1.4	1.2	1.2	0.9	1.2	1.5	2.2	1.3	0.7	0.7	0.7	0.6	1.1	0.5	0.4	0.6	0.7	0.7	0.9	0.8	2.2	4.2	2.2	1.3	1.2	4.2	
16	1.0	1.2	1.1	1.2	1.1	1.1	1.2	2.7	2.7	3.4	3.0	1.7	1.5	1.9	5.9	2.9	3.0	2.5	1.7	0.8	0.7	0.5	0.3	0.7	1.8	5.9	
17	0.5	0.2	0.4	1.2	0.2	0.2	0.2	0.2	0.4	0.4	0.8	0.6	0.4	0.2	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.8	0.4	1.2
18	0.7	0.5	0.7	0.8	0.4	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.3	0.3	0.4	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.8	
19	0.2	0.3	0.3	0.4	0.3	0.4	0.5	0.6	0.7	0.7	0.9	1.3	0.9	0.7	0.5	0.6	0.3	0.4	0.5	0.9	0.6	0.8	0.7	0.6	0.6	1.3	
20	0.6	6.2	0.7	2.0	1.8	2.2	3.6	6.6	6.2	9.5	4.4	5.6	5.8	10.2	9.8	4.8	8.4	3.4	9.7	8.2	6.9	8.6	2.6	2.4	5.4	10.2	
21	2.5	2.0	2.1	1.7	1.6	1.3	1.5	1.5	1.5	1.8	1.6	1.3	1.2	1.1	2.8	8.6	3.0	4.0	1.8	3.0	2.2	1.4	1.2	3.9	2.3	8.6	
22	7.2	6.0	7.8	6.3	6.9	3.7	3.5	2.7	7.2	6.1	4.5	6.3	4.0	2.9	6.3	9.0	7.0	4.5	7.5	7.9	8.5	9.1	11.6	7.9	6.4	11.6	
23	14.8	13.6	10.4	6.6	2.6	2.2	1.6	4.8	5.5	10.0	4.3	1.9	1.4	4.5	4.9	5.2	5.1	3.5	6.2	3.0	3.3	3.5	2.7	3.2	5.2	14.8	
24	4.7	6.6	5.4	6.0	10.8	5.7	5.4	4.2	5.1	7.8	6.2	6.5	6.4	6.5	3.6	7.0	4.7	4.3	3.1	3.7	7.8	7.8	6.6	7.5	6.0	10.8	
25	7.2	8.4	8.3	8.6	8.9	9.6	10.7	19.7	11.5	11.2	10.6	7.9	6.0	6.9	7.7	5.6	3.0	4.0	3.9	6.7	7.4	6.2	7.1	5.8	8.0	19.7	
26	6.3	6.6	6.1	6.3	4.3	7.6	8.3	8.0	8.7	9.2	7.8	4.0	4.1	3.4	11.2	10.2	10.4	5.7	3.1	6.7	7.8	10.7	12.9	13.8	7.6	13.8	
27	5.1	2.6	2.6	2.9	1.1	1.6	1.0	0.9	1.6	3.1	1.5	2.5	1.9	1.4	X	X	X	X	X	X	X	X	X	X	X	-	-
28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-
29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1.5	1.6	1.6	1.9	2.2	2.3	2.5	2.4	2.5	2.7	-	-	
30	2.6	2.7	3.0	3.1	3.4	4.4	3.8	4.1	4.6	4.3	5.5	5.8	5.4	4.1	3.7	3.2	2.8	2.8	2.9	2.8	3.0	3.4	3.6	3.8	3.7	5.8	
31	4.0	4.2	4.5	4.7	4.8	5.0	5.5	6.3	6.4	6.6	6.7	7.0	9.6	7.2	7.2	6.0	6.2	6.2	6.4	6.0	6.3	6.6	6.4	6.8	6.1	9.6	
NO.	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	696	94%	
MEAN	3.3	3.5	3.3	3.3	3.4	3.1	3.1	3.6	4.2	4.5	3.9	3.8	3.5	3.8	4.4	3.8	3.2	3.1	3.0	3.2	3.5	4.0	3.9	3.7			
MAX	14.8	13.6	10.4	10.4	14.4	12.0	10.7	19.7	14.3	13.4	15.9	17.3	17.4	15.3	19.6	11.1	10.4	10.1	9.7	8.2	8.5	10.7	13.0	13.8			



Number of 24HR Exceedences	0	Proposed Guideline
Number of Non-Zero Readings	696	
Maximum 1-HR Average	19.7 UG/M3	
Maximum 24-HR Average	9.4 UG/M3	
IZS Calibration Time		Operational Time
Down Time	0	Operational Uptime
Standard Deviation	3.304	Monthly Average
		696 HRS
		93.5 %
		3.6 UG/M3

West PM₁₀ (µg/m³) – October 2023

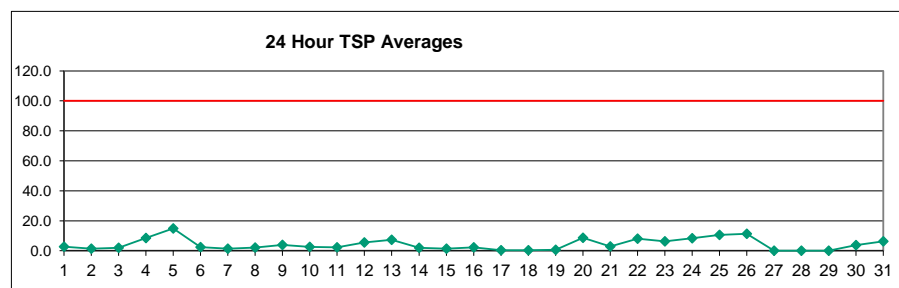
Day	HOUR																								MEAN	MAX	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	4.2	4.2	3.9	4.0	4.6	4.4	4.5	4.3	3.9	5.3	3.2	2.8	2.3	1.8	1.2	1.1	0.7	0.8	0.8	1.5	1.6	1.2	1.3	1.0	2.7	5.3	
2	1.0	1.0	0.9	1.1	1.2	1.1	1.3	1.6	1.5	1.5	1.2	1.5	0.9	0.7	1.0	0.7	0.9	0.9	0.9	1.4	2.0	2.2	2.9	2.7	1.3	2.9	
3	2.3	2.1	1.9	2.0	2.1	2.1	2.7	3.8	5.2	3.3	2.7	1.8	1.6	1.4	0.8	1.2	1.2	0.9	1.0	1.0	1.0	1.3	1.1	2.0	1.9	5.2	
4	0.9	0.8	0.6	0.5	0.5	0.4	0.6	0.6	10.5	9.4	6.9	16.5	12.6	21.5	29.2	16.6	12.1	8.7	8.2	11.4	7.1	4.1	2.4	3.4	7.7	29.2	
5	3.1	4.7	9.4	9.0	12.5	11.6	12.3	14.2	21.3	19.7	23.3	25.5	25.8	22.6	18.9	11.1	15.2	15.0	3.0	3.1	4.1	11.6	19.2	6.3	13.4	25.8	
6	3.5	4.7	4.5	4.0	2.8	2.3	2.9	3.5	4.6	2.7	3.0	1.2	1.3	1.1	1.3	1.1	0.7	2.8	1.9	2.8	1.6	1.1	1.0	1.1	2.4	4.7	
7	1.2	1.3	1.6	1.2	1.2	1.3	1.4	1.5	1.3	1.5	1.2	1.2	0.9	0.8	1.0	0.8	0.7	2.0	2.6	2.9	1.8	1.8	1.7	1.5	1.4	2.9	
8	1.8	1.7	1.3	1.6	1.8	1.6	1.6	1.6	2.1	1.7	1.5	1.5	1.3	1.5	1.2	1.3	1.4	2.0	2.5	3.3	4.6	4.1	3.9	3.9	2.1	4.6	
9	3.2	2.9	3.4	3.1	2.9	3.1	2.8	3.1	3.0	3.6	3.3	2.9	2.0	1.6	1.3	1.5	1.4	14.3	7.9	5.3	4.5	4.5	4.2	4.9	3.8	14.3	
10	4.2	4.1	4.3	4.4	3.2	2.8	2.7	2.6	1.7	1.3	2.0	1.5	1.6	2.6	3.5	3.9	2.9	1.2	1.5	2.2	2.3	1.6	1.6	0.8	2.5	4.4	
11	0.6	0.9	0.6	0.4	0.4	0.3	0.3	0.4	0.9	0.8	0.6	0.5	0.5	0.4	0.5	0.5	0.4	7.8	7.7	1.4	2.3	7.4	10.3	8.1	2.2	10.3	
12	1.8	0.3	0.5	0.8	3.0	1.2	0.9	1.1	1.7	1.4	3.4	4.8	7.0	14.4	17.7	16.3	6.4	2.5	2.9	6.0	5.4	11.3	9.2	10.0	5.4	17.7	
13	6.7	7.3	8.3	10.4	14.4	12.0	7.4	4.7	12.8	14.8	14.1	11.8	7.8	5.5	6.8	4.6	3.3	1.9	2.0	3.5	3.8	5.0	2.5	2.9	7.3	14.8	
14	3.4	3.3	2.9	2.6	2.3	2.3	2.4	2.5	2.3	2.6	2.3	1.9	1.4	1.2	0.9	1.3	0.9	1.1	1.5	1.9	2.3	1.7	2.3	1.9	2.1	3.4	
15	1.4	1.2	1.2	0.9	1.2	1.5	2.4	1.3	0.7	0.7	0.7	0.6	1.3	0.5	0.4	0.6	0.7	0.7	0.9	0.8	2.2	6.2	2.7	1.3	1.3	6.2	
16	1.0	1.2	1.1	1.2	1.1	1.1	1.2	3.1	3.2	4.9	4.3	1.8	1.6	2.4	8.7	4.3	3.6	2.5	1.7	0.8	0.7	0.5	0.3	0.7	2.2	8.7	
17	0.5	0.2	0.4	1.8	0.2	0.2	0.2	0.2	0.4	0.4	0.9	0.7	0.4	0.2	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.5	0.9	0.4	1.8	
18	0.7	0.5	0.7	0.8	0.4	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.3	0.3	0.4	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.8	
19	0.2	0.3	0.3	0.4	0.3	0.4	0.5	0.6	0.7	0.7	0.9	1.5	0.9	0.7	0.5	0.6	0.3	0.4	0.5	0.9	0.6	0.8	0.7	0.6	0.6	1.5	
20	0.6	0.9	0.7	2.7	2.3	3.1	5.3	9.8	9.3	14.3	6.6	8.3	8.5	15.3	14.6	7.1	12.5	4.8	14.6	12.3	10.3	12.8	2.6	2.4	7.9	15.3	
21	2.5	2.0	2.1	1.7	1.6	1.3	1.5	1.5	1.5	1.8	1.6	1.3	1.2	1.1	3.9	12.8	4.4	5.9	2.2	4.3	2.4	1.4	1.2	5.1	2.8	12.8	
22	10.5	7.9	10.6	7.5	8.9	3.7	3.5	2.7	8.9	7.5	4.9	6.9	4.0	2.9	8.8	13.2	10.2	4.5	9.5	9.8	10.7	10.8	13.9	7.9	7.9	13.9	
23	14.8	13.6	10.4	7.5	2.6	2.2	1.6	5.5	6.8	14.9	6.1	2.0	1.4	6.1	6.7	5.6	6.2	4.8	9.0	4.1	4.5	4.7	3.5	4.1	6.2	14.9	
24	6.9	9.6	7.8	8.7	15.2	7.9	7.4	5.4	7.4	11.3	8.8	9.4	9.2	9.3	4.4	10.1	6.1	4.8	3.1	3.7	9.9	10.0	7.9	7.6	8.0	15.2	
25	8.9	10.5	9.2	10.9	11.3	11.8	13.2	25.9	14.1	13.8	13.0	9.9	6.8	9.2	10.4	6.8	3.0	4.0	3.9	8.4	9.7	7.3	9.9	7.0	9.9	25.9	
26	7.9	8.0	6.8	7.2	4.6	10.9	12.2	11.7	12.4	13.6	11.3	4.4	4.5	3.8	16.1	14.6	15.5	8.1	3.3	9.7	11.6	15.8	19.1	20.5	10.6	20.5	
27	7.1	2.8	2.7	3.2	1.1	1.6	1.0	0.9	1.6	3.5	1.5	2.6	1.9	1.4	X	X	X	X	X	X	X	X	X	X	-	-	
28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-
29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1.5	1.6	1.6	1.9	2.2	2.3	2.5	2.4	2.5	2.7	-	-	
30	2.6	2.7	3.0	3.1	3.4	4.4	3.8	4.1	4.6	4.3	5.5	5.8	5.4	4.1	3.7	3.2	2.8	2.8	2.9	2.8	3.0	3.4	3.6	3.8	3.7	5.8	
31	4.0	4.2	4.5	4.7	4.8	5.0	5.5	6.3	6.4	6.6	6.7	7.0	12.5	7.2	7.2	6.0	6.2	6.2	6.4	6.0	6.3	6.6	6.4	6.8	6.2	12.5	
NO.	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	696	94%	
MEAN	3.7	3.9	3.6	3.7	3.9	3.5	3.6	4.3	5.2	5.8	4.9	4.8	4.4	4.9	6.0	5.1	4.2	3.9	3.6	3.9	4.1	4.9	4.8	4.2			
MAX	14.8	13.6	10.6	10.9	15.2	12.0	13.2	25.9	21.3	19.7	23.3	25.5	25.8	22.6	29.2	16.6	15.5	15.0	14.6	12.3	11.6	15.8	19.2	20.5			



Number of Non-Zero Readings	696		
Maximum 1-HR Average	29.2 UG/M3		
Maximum 24-HR Average	13.4 UG/M3		
IZS Calibration Time		OperatioEI Time	696 HRS
Down Time	0	OperatioEI Uptime	93.5 %
Standard Deviation	4.6	Monthly Average	4.4 UG/M3

West TSP ($\mu\text{g}/\text{m}^3$) – October 2023

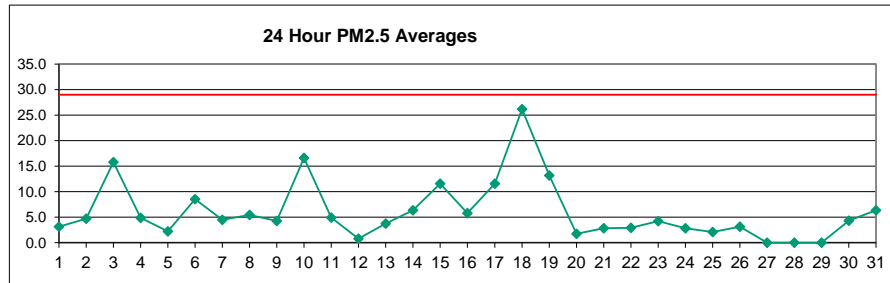
Day	HOUR																								MEAN	MAX	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	4.2	4.2	3.9	4.0	4.6	4.4	4.5	4.3	3.9	5.8	3.2	2.8	2.3	1.8	1.2	1.1	0.7	0.8	0.8	1.5	1.6	1.2	1.3	1.0	2.7	5.8	
2	1.0	1.0	0.9	1.1	1.2	1.1	1.3	1.6	1.5	1.5	1.2	1.5	0.9	0.7	1.0	0.7	0.9	0.9	0.9	1.4	2.0	2.2	2.9	2.7	1.3	2.9	
3	2.3	2.1	1.9	2.0	2.1	2.1	2.7	3.8	5.2	3.3	2.7	1.8	1.6	1.4	0.8	1.2	1.2	0.9	1.0	1.0	1.0	1.3	1.1	2.0	1.9	5.2	
4	0.9	0.8	0.6	0.5	0.5	0.4	0.6	0.6	12.0	10.4	7.4	19.0	14.4	24.8	33.8	19.0	13.2	8.7	8.7	12.5	7.1	4.1	2.4	3.4	8.6	33.8	
5	3.1	4.7	9.4	9.0	13.3	11.6	12.4	15.8	24.4	22.7	27.0	29.6	29.9	26.1	21.7	12.3	17.3	16.8	3.0	3.1	4.1	12.0	22.0	6.3	14.9	29.9	
6	3.5	4.7	4.5	4.0	2.8	2.3	2.9	3.5	4.6	2.7	3.0	1.2	1.3	1.1	1.3	1.1	0.7	2.8	1.9	2.8	1.6	1.1	1.0	1.1	2.4	4.7	
7	1.2	1.3	1.6	1.2	1.2	1.3	1.4	1.5	1.3	1.5	1.2	1.2	0.9	0.8	1.0	0.8	0.7	2.0	2.6	2.9	1.8	1.8	1.7	1.5	1.4	2.9	
8	1.8	1.7	1.3	1.6	1.8	1.6	1.6	1.6	2.1	1.7	1.5	1.5	1.3	1.5	1.2	1.3	1.4	2.0	2.5	3.3	4.6	4.1	3.9	3.9	2.1	4.6	
9	3.2	2.9	3.4	3.1	2.9	3.1	2.8	3.1	3.0	3.6	3.3	2.9	2.0	1.6	1.3	1.5	1.4	16.3	7.9	5.3	4.5	4.5	4.2	4.9	3.9	16.3	
10	4.2	4.1	4.3	4.4	3.2	2.8	2.7	2.6	1.7	1.3	2.0	1.5	1.6	2.6	3.5	3.9	2.9	1.2	1.5	2.2	2.3	1.6	1.6	0.8	2.5	4.4	
11	0.6	0.9	0.6	0.4	0.4	0.3	0.3	0.4	0.9	0.8	0.6	0.5	0.5	0.4	0.5	0.5	0.4	7.8	7.9	1.4	2.3	7.4	10.3	8.6	2.3	10.3	
12	1.8	0.3	0.5	0.8	3.0	1.2	0.9	1.1	1.7	1.4	3.4	4.8	7.3	15.3	19.0	17.0	6.4	2.5	2.9	6.0	5.4	11.3	9.2	10.0	5.6	19.0	
13	6.7	7.3	8.3	10.4	14.4	12.0	7.4	4.7	12.9	15.5	14.1	12.9	7.8	5.5	6.8	4.6	3.3	1.9	2.0	3.5	3.8	5.0	2.5	2.9	7.3	15.5	
14	3.4	3.3	2.9	2.6	2.3	2.3	2.4	2.5	2.3	2.6	2.3	1.9	1.4	1.2	0.9	1.3	0.9	1.1	1.5	1.9	2.3	1.7	2.3	1.9	2.1	3.4	
15	1.4	1.2	1.2	0.9	1.2	1.5	2.4	1.3	0.7	0.7	0.6	1.3	0.5	0.4	0.6	0.7	0.7	0.9	0.8	2.2	6.7	2.7	1.3	1.4	1.4	6.7	
16	1.0	1.2	1.1	1.2	1.1	1.1	1.2	3.1	3.2	4.9	4.3	1.8	1.6	2.4	9.6	4.3	3.6	2.5	1.7	0.8	0.7	0.5	0.3	0.7	2.3	9.6	
17	0.5	0.2	0.4	1.8	0.2	0.2	0.2	0.2	0.4	0.4	0.9	0.7	0.4	0.2	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.5	0.9	0.4	1.8	
18	0.7	0.5	0.7	0.8	0.4	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.4	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.8	
19	0.2	0.3	0.3	0.4	0.3	0.4	0.5	0.6	0.7	0.7	0.9	1.5	0.9	0.7	0.5	0.6	0.3	0.4	0.5	0.9	0.6	0.8	0.7	0.6	0.6	1.5	
20	0.6	10.1	0.7	2.7	2.3	3.1	5.5	11.0	10.5	16.5	7.2	9.2	9.5	17.7	16.7	7.8	14.2	4.8	16.1	13.0	10.6	13.5	2.6	2.4	8.7	17.7	
21	2.5	2.0	2.1	1.7	1.6	1.3	1.5	1.5	1.5	1.8	1.6	1.3	1.2	1.1	3.9	14.5	4.5	6.3	2.2	4.3	2.4	1.4	1.2	5.1	2.9	14.5	
22	10.8	7.9	10.6	7.5	8.9	3.7	3.5	2.7	8.9	7.5	4.9	6.9	4.0	2.9	8.8	14.4	10.5	4.5	10.3	10.5	11.4	10.8	13.9	7.9	8.1	14.4	
23	14.8	13.6	10.4	7.5	2.6	2.2	1.6	5.5	6.8	15.2	6.1	2.0	1.4	6.1	6.7	5.6	6.2	4.8	9.5	4.1	4.5	4.7	3.5	4.1	6.2	15.2	
24	7.0	10.3	8.0	8.7	16.3	7.9	7.4	5.4	7.9	12.9	9.4	10.2	9.7	9.9	4.4	10.4	6.1	4.8	3.1	3.7	10.5	11.1	7.9	7.6	8.4	16.3	
25	8.9	10.9	9.2	11.1	11.3	13.7	15.3	27.1	16.4	15.9	15.1	10.4	6.8	9.2	11.3	6.8	3.0	4.0	3.9	8.4	9.9	7.3	9.9	7.0	10.5	27.1	
26	7.9	8.0	6.8	7.2	4.6	11.3	13.5	12.8	14.0	14.9	11.9	4.4	4.5	3.8	18.2	16.4	17.0	8.6	3.3	9.7	11.6	17.0	21.6	7.0	11.3	23.1	
27	7.1	2.8	2.7	3.2	1.1	1.6	1.0	0.9	1.6	3.5	1.5	2.6	1.9	1.4	X	X	X	X	X	X	X	X	X	X	-	-	
28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-
29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1.5	1.6	1.9	2.2	2.3	2.5	2.4	2.5	2.7	-	-	
30	2.6	2.7	3.0	3.1	3.4	4.4	3.8	4.1	4.6	4.3	5.5	5.8	5.4	4.1	3.7	3.2	2.8	2.8	2.9	2.8	3.0	3.4	3.6	3.8	3.7	5.8	
31	4.0	4.2	4.5	4.7	4.8	5.0	5.5	6.3	6.4	6.6	6.7	7.0	13.1	7.2	7.2	6.0	6.2	6.2	6.4	6.0	6.3	6.6	6.4	6.8	6.3	13.1	
NO.	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	696	94%	
MEAN	3.7	4.0	3.6	3.7	3.9	3.6	3.7	4.5	5.6	6.2	5.2	5.1	4.7	5.3	6.5	5.5	4.4	4.1	3.8	4.0	4.2	5.0	5.0	4.3			
MAX	14.8	13.6	10.6	11.1	16.3	13.7	15.3	27.1	24.4	22.7	27.0	29.6	29.9	26.1	33.8	19.0	17.3	16.8	16.1	13.0	11.6	17.0	22.0	23.1			



Number of 24HR Exceedences	0	Proposed Guideline
Number of Non-Zero Readings	696	
Maximum 1-HR Average	33.8 UG/M3	
Maximum 24-HR Average	14.9 UG/M3	
IZS Calibration Time		Operational Time
Down Time	0	Operational Uptime
Standard Deviation	5.108	Monthly Average
		696 HRS
		93.5 %
		4.6 UG/M3

Berm PM_{2.5} (µg/m³) – October 2023

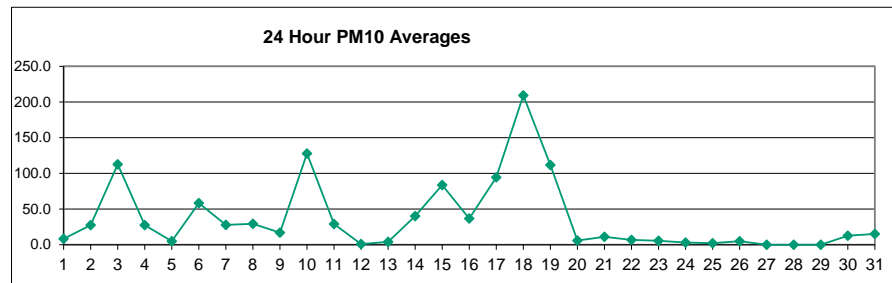
DAY	HOUR																								MEAN	MAX	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	2.4	2.3	3.8	3.2	3.4	3.8	4.5	3.3	3.7	5.2	7.5	7.3	7.8	4.6	4.1	3.1	0.9	0.6	0.4	0.4	0.7	0.8	1.0	0.7	3.1	7.8	
2	0.6	0.7	0.6	0.7	0.9	0.8	0.7	1.2	2.0	5.4	8.0	16.2	10.5	14.4	13.6	14.7	8.0	6.0	2.1	1.5	1.3	1.2	1.0	0.8	4.7	16.2	
3	1.0	1.3	1.2	14.0	1.5	1.6	1.8	3.7	6.3	11.1	8.5	12.2	21.9	15.4	30.0	20.6	23.9	33.8	21.6	26.9	12.1	24.5	56.8	27.6	15.8	56.8	
4	13.2	8.2	4.3	4.4	8.8	20.5	12.8	9.4	7.7	1.1	1.2	1.4	1.4	1.2	1.0	1.0	1.1	1.2	1.1	0.7	0.7	0.7	10.0	3.9	4.9	20.5	
5	4.8	3.9	3.4	3.2	2.9	1.8	1.5	2.0	1.4	1.5	1.5	1.3	1.7	1.9	2.3	2.3	1.9	2.3	2.2	2.0	2.1	1.8	1.3	2.2	4.8	2.2	4.8
6	3.9	3.6	5.4	3.0	3.2	1.8	1.7	1.9	3.3	3.9	8.3	42.3	41.6	22.6	20.8	20.0	4.9	1.3	1.6	1.5	1.4	2.0	2.5	1.8	8.5	42.3	
7	1.8	1.1	1.0	1.2	1.1	1.1	1.2	1.1	1.5	1.9	1.8	2.0	14.4	7.7	27.7	21.9	2.1	1.1	1.2	1.0	1.2	6.4	4.3	2.5	4.5	27.7	
8	1.8	1.7	1.4	1.3	2.0	1.3	1.1	1.6	2.0	1.7	1.5	3.1	15.7	13.8	24.4	27.6	10.4	2.8	2.1	3.1	2.7	2.2	2.6	2.8	5.5	27.6	
9	2.4	2.7	3.4	2.8	2.0	2.2	2.0	2.0	2.1	2.6	2.4	2.5	4.0	3.3	15.3	5.7	1.6	3.8	1.7	9.0	6.3	9.5	8.1	5.0	4.3	15.3	
10	4.5	6.1	5.1	51.7	41.7	39.5	23.9	32.9	28.6	26.6	20.1	13.2	12.5	11.4	19.1	17.3	14.8	6.5	5.1	1.4	1.6	5.3	3.2	6.6	16.6	51.7	
11	8.8	2.3	2.4	2.5	6.1	8.2	6.9	2.9	1.5	8.4	10.4	3.4	5.7	13.9	15.2	11.9	4.3	0.7	0.3	0.4	0.6	0.3	0.3	0.1	4.9	15.2	
12	0.3	0.8	0.5	0.8	0.3	0.2	0.4	0.5	1.5	1.7	1.8	0.4	0.2	0.2	0.3	0.4	0.4	0.5	1.8	0.6	1.0	1.1	1.2	1.8	0.8	1.8	
13	2.9	3.6	4.2	5.0	6.3	6.7	7.8	2.7	9.2	7.2	4.9	3.8	3.7	2.5	2.0	2.1	2.7	2.1	2.3	1.4	0.9	0.8	1.9	2.6	3.7	9.2	
14	2.8	4.8	3.8	5.6	5.3	3.3	2.8	1.6	2.4	2.9	3.8	8.6	12.4	11.6	18.3	34.4	13.5	5.0	1.5	2.3	1.7	1.2	1.4	1.1	6.3	34.4	
15	1.5	2.9	1.9	17.0	7.4	1.3	1.5	0.9	3.7	11.6	17.4	8.8	30.7	29.6	31.9	41.4	30.4	23.3	8.8	1.6	1.1	1.0	1.5	1.1	11.6	41.4	
16	0.8	1.4	1.3	1.2	1.1	0.7	1.2	4.1	6.2	4.6	5.0	5.1	3.2	4.4	3.7	4.5	18.9	31.0	11.2	4.9	3.3	11.0	6.0	3.8	5.8	31.0	
17	17.6	9.7	2.6	2.0	1.6	10.3	4.8	2.7	2.0	3.7	7.8	6.9	14.6	14.4	10.6	13.5	18.5	15.5	21.6	26.5	8.2	13.2	30.1	18.8	11.6	30.1	
18	11.4	9.1	11.2	16.9	15.4	28.6	48.5	51.1	53.4	66.9	84.0	36.1	34.3	36.3	36.7	26.3	15.0	4.9	5.5	8.5	3.5	9.0	11.4	4.1	26.2	84.0	
19	2.4	1.9	0.7	0.2	0.6	3.8	1.7	1.7	1.6	6.4	21.1	13.6	25.4	24.0	23.9	21.4	13.0	20.7	26.0	22.8	18.5	27.8	25.1	11.4	13.2	27.8	
20	2.0	1.9	1.0	1.1	0.5	0.7	1.2	1.3	1.7	3.6	2.2	2.2	3.6	1.1	2.3	2.1	2.3	3.2	2.0	1.0	1.0	0.8	1.7	1.5	1.7	3.6	
21	2.9	2.2	3.0	2.0	3.1	5.7	2.8	1.5	1.6	2.0	2.4	1.7	10.9	9.3	2.3	2.2	2.9	1.1	1.4	1.7	1.2	1.2	0.8	1.8	2.8	10.9	
22	1.2	1.9	1.8	1.7	1.4	1.6	1.6	1.9	1.6	1.8	4.4	6.4	6.7	5.6	2.8	2.7	3.1	2.6	2.8	2.6	2.9	2.7	3.5	4.9	2.9	6.7	
23	5.6	4.2	3.0	1.3	1.4	1.3	1.0	0.6	0.5	0.4	0.7	0.7	0.7	0.7	3.9	3.0	2.7	5.9	7.4	20.3	16.0	9.9	5.1	5.0	4.2	20.3	
24	2.3	2.8	3.0	4.5	3.9	1.8	2.3	1.9	2.6	2.8	2.4	3.7	4.2	3.5	1.5	2.5	3.6	3.8	1.8	3.6	3.1	2.6	1.8	2.3	2.8	4.5	
25	2.0	2.6	2.5	2.8	2.2	2.3	2.1	2.0	1.7	1.9	2.2	3.1	2.8	2.2	2.0	2.0	1.9	2.1	2.3	2.2	1.8	1.1	1.0	1.1	2.1	3.1	
26	1.3	3.1	1.5	1.1	1.3	1.0	3.5	1.9	2.4	6.6	4.9	1.7	2.4	1.2	2.3	3.9	3.1	2.6	3.0	14.0	2.1	1.6	4.7	4.0	3.1	14.0	
27	2.0	2.7	1.8	0.6	0.8	0.4	1.4	1.9	4.2	9.3	3.9	4.7	11.0	12.1	X	X	X	X	X	X	X	X	X	X	-	-	
28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	10.3	6.2	11.9	33.4	28.9	15.7	16.5	12.3	3.5	-	-	
30	3.3	2.7	3.2	3.5	2.9	2.4	3.7	3.1	3.9	4.1	5.1	5.3	5.5	8.0	7.6	4.4	4.2	5.8	3.6	3.7	4.4	5.0	4.2	4.2	4.3	8.0	
31	4.6	4.9	7.0	6.9	5.7	7.2	6.1	5.8	5.9	6.7	7.9	10.3	X	10.0	6.2	5.7	5.1	4.9	5.2	6.8	6.4	6.0	5.3	5.5	6.4	10.3	
NO.	29	29	29	29	29	29	29	29	29	29	29	29	29	30	29	29	29	29	29	29	29	29	29	29	697	94%	
MEAN	3.9	3.3	3.0	5.6	4.6	5.6	5.3	5.2	5.7	7.4	8.7	7.9	11.1	10.0	11.7	11.3	7.6	7.1	6.2	6.9	4.3	5.8	7.3	4.5			
MAX	17.6	9.7	11.2	51.7	41.7	39.5	48.5	51.1	53.4	66.9	84.0	42.3	41.6	36.3	36.7	41.4	30.4	33.8	33.4	28.9	18.5	27.8	56.8	27.6			



Number of 24HR Exceedences	0	Proposed Guideline	
Number of Non-Zero Readings	697		
Maximum 1-HR Average	84.0 UG/M3		
Maximum 24-HR Average	26.2 UG/M3		
Monthly Calibration	0	Operational Time	697 HRS
Standard Deviation	9.4	Operational Uptime	93.7 %
		Monthly Average	6.7 UG/M3

Berm PM₁₀ (µg/m³) – October 2023

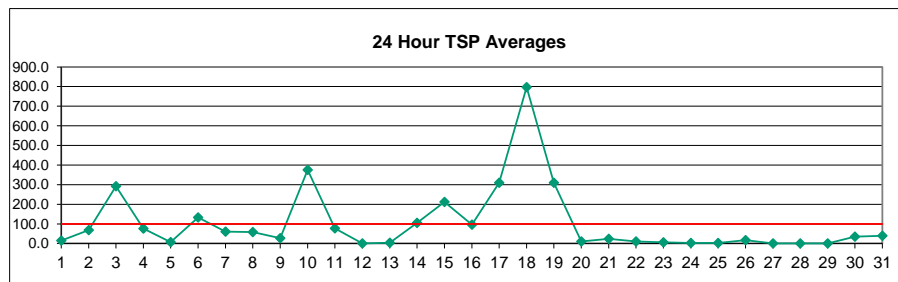
DAY	HOUR																								MEAN	MAX	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	2.4	2.3	3.8	3.2	3.4	3.8	4.5	3.3	3.7	12.8	34.9	30.4	32.6	19.0	16.9	15.1	1.7	0.7	0.4	0.4	0.7	0.8	1.0	0.7	8.3	34.9	
2	0.6	0.7	0.6	0.7	0.9	0.8	0.7	1.2	8.1	32.2	50.5	90.9	74.9	103.9	94.2	95.9	49.9	32.4	8.9	3.9	1.9	1.2	1.3	0.8	27.4	103.9	
3	1.0	1.3	1.2	70.1	1.5	1.6	1.8	5.2	29.4	75.6	62.1	89.4	161.0	114.7	219.7	191.4	171.6	234.0	164.2	194.4	72.5	173.3	431.1	238.1	112.8	431.1	
4	98.9	55.4	24.2	18.9	52.6	147.3	95.8	69.2	51.9	2.8	2.7	4.4	3.6	2.8	1.4	1.3	1.1	1.2	1.1	0.7	0.7	0.7	14.9	5.1	27.4	147.3	
5	6.5	5.1	4.1	3.9	3.3	1.8	2.7	3.3	2.5	3.9	4.0	3.6	6.3	6.4	9.3	8.5	9.2	6.1	6.1	6.0	5.8	5.9	2.5	1.5	4.9	9.3	
6	13.7	16.5	17.6	10.5	12.2	2.9	2.6	4.2	13.1	24.1	63.2	338.2	333.1	189.8	150.8	136.6	27.4	4.3	4.7	4.3	4.3	8.1	11.8	5.6	58.3	338.2	
7	4.0	2.5	1.7	2.6	1.9	2.2	2.7	2.1	4.4	7.1	6.5	10.5	111.8	52.7	200.9	142.3	13.1	4.2	4.2	1.9	3.4	45.1	29.8	8.8	27.8	200.9	
8	5.1	3.9	3.5	2.4	5.9	2.1	1.7	3.6	5.2	4.6	3.4	17.4	111.1	82.0	154.1	185.8	75.2	11.5	3.6	7.0	4.0	2.2	3.7	4.0	29.3	185.8	
9	2.4	3.4	6.9	4.2	2.0	2.2	2.0	2.0	2.1	3.0	2.8	6.3	21.5	15.7	37.0	115.1	4.8	5.8	5.2	43.6	19.0	44.0	38.4	20.9	17.1	115.1	
10	13.8	23.6	21.0	415.6	347.9	331.6	189.1	274.9	242.6	177.2	161.8	93.9	96.5	77.2	156.8	150.0	116.8	53.3	31.8	2.8	4.4	29.4	12.3	40.0	127.7	415.6	
11	47.4	7.7	8.3	12.0	45.5	65.3	54.6	16.4	6.2	54.6	54.7	9.7	21.6	84.5	95.9	85.5	23.2	1.0	0.3	0.4	0.6	0.3	0.3	0.1	29.0	95.9	
12	0.3	0.8	0.6	0.8	0.3	0.2	0.4	0.5	1.9	2.0	2.2	0.4	0.2	0.2	0.3	0.4	0.4	0.5	1.8	0.6	1.0	1.1	1.2	1.8	0.8	2.2	
13	2.9	3.6	4.2	5.0	6.3	6.7	7.8	2.7	12.4	8.0	4.9	3.8	3.7	2.5	2.0	2.5	4.4	3.3	2.4	1.4	0.9	0.8	2.1	2.6	4.0	12.4	
14	2.8	5.7	3.9	7.6	7.4	4.0	2.9	1.6	2.4	3.2	13.9	72.3	103.6	100.1	147.0	284.0	130.6	38.8	7.9	10.9	4.3	2.0	3.3	1.1	40.1	284.0	
15	2.7	16.1	6.1	72.3	21.0	1.6	3.6	1.4	20.5	109.4	122.5	57.4	272.3	243.1	262.5	319.8	219.2	172.9	68.5	6.4	2.3	1.7	3.8	2.0	83.7	319.8	
16	0.8	3.4	3.3	2.1	1.5	0.7	4.3	22.6	35.9	24.4	25.3	27.9	16.9	26.3	18.0	20.6	150.4	243.8	96.3	28.5	18.0	55.9	34.8	18.2	36.7	243.8	
17	142.8	78.6	11.1	7.0	1.9	17.4	13.5	6.3	2.5	12.6	55.7	54.9	114.3	115.2	80.7	114.8	166.9	142.2	211.9	243.2	68.3	117.3	284.9	203.3	94.5	284.9	
18	97.8	78.6	100.8	177.3	153.4	266.6	443.6	457.0	412.4	548.3	711.7	266.8	232.4	231.1	244.8	177.6	103.5	30.4	36.8	49.6	22.2	70.5	81.5	25.0	209.1	711.7	
19	7.5	5.1	0.7	0.2	1.4	11.0	2.0	2.0	7.4	52.6	173.4	118.5	226.9	219.0	229.7	186.1	103.2	175.8	216.5	185.4	145.1	289.4	226.9	96.0	111.7	289.4	
20	6.3	15.0	3.1	2.4	0.9	1.7	3.4	4.3	7.1	15.9	9.2	6.2	17.1	3.1	8.5	7.5	8.8	12.4	3.7	1.9	1.0	0.8	2.2	1.7	6.0	17.1	
21	3.9	2.4	3.5	2.2	3.9	8.5	4.0	1.5	1.6	3.2	12.3	5.7	96.6	69.1	12.5	8.0	11.8	3.2	3.2	4.9	1.9	1.9	1.5	2.8	11.2	96.6	
22	1.2	1.9	1.9	2.3	1.4	1.6	1.6	1.9	1.6	1.8	17.9	22.8	35.0	25.1	6.9	7.0	8.3	2.8	2.8	2.6	2.9	2.7	3.5	4.9	6.8	35.0	
23	5.6	4.2	3.0	1.3	1.4	1.3	1.0	0.6	0.5	0.4	0.7	0.7	0.7	4.9	3.0	2.7	7.3	9.5	30.2	23.7	14.7	7.1	6.0	5.5	30.2	5.5	30.2
24	2.5	3.0	3.0	5.6	4.0	1.8	2.3	1.9	2.9	3.0	2.7	4.6	4.6	3.6	1.5	2.5	3.7	3.9	1.8	3.6	3.1	2.6	1.8	2.3	3.0	5.6	
25	2.0	2.6	2.5	2.8	2.2	2.3	2.1	2.0	1.7	1.9	2.2	3.1	3.7	2.6	2.5	2.0	1.9	2.1	2.3	2.2	1.8	1.1	1.0	1.1	2.2	3.7	
26	1.3	3.1	1.5	1.1	1.3	1.0	3.5	1.9	4.0	16.6	5.6	2.7	7.2	1.3	6.6	13.1	4.0	2.6	3.5	20.3	2.3	1.9	6.0	4.5	4.9	20.3	
27	2.2	3.9	2.0	0.6	0.8	0.4	1.4	2.1	5.9	13.8	24.7	30.9	95.0	97.0	X	X	X	X	X	X	X	X	X	X	-	-	
28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
30	9.8	4.0	5.8	6.6	2.9	2.4	4.9	3.1	4.8	5.8	10.3	11.6	12.0	43.9	38.0	15.6	16.4	28.8	10.2	8.3	16.0	22.0	9.7	7.2	12.5	43.9	
31	7.8	10.6	27.1	24.1	14.0	22.0	11.3	7.9	7.6	11.2	22.8	52.9	X	49.0	10.1	10.5	8.2	6.2	6.5	11.4	11.7	6.3	5.3	5.5	15.2	52.9	
NO.	29	29	29	29	29	29	29	29	29	29	29	29	29	30	29	29	29	29	29	29	29	29	29	29	697	94%	
MEAN	17.1	12.6	9.5	29.8	24.2	31.5	30.1	31.3	31.1	42.5	57.4	49.6	79.5	69.1	80.8	79.2	51.0	45.7	41.5	37.7	19.7	35.7	45.3	25.0			
MAX	142.8	78.6	100.8	415.6	347.9	331.6	443.6	457.0	412.4	548.3	711.7	338.2	333.1	243.1	262.5	319.8	219.2	243.8	287.3	243.2	145.1	289.4	431.1	238.1			



Number of Non-Zero Readings	697
Maximum 1-HR Average	711.7 UG/M3
Maximum 24-HR Average	209.1 UG/M3
Monthly Calibration	0
Standard Deviation	80.01
Operational Time	697 HRS
Operational Uptime	93.7 %
Monthly Average	40.7 UG/M3

Berm TSP ($\mu\text{g}/\text{m}^3$) – October 2023

DAY	HOUR																								MEAN	MAX	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	2.4	2.3	3.8	3.2	3.4	3.8	4.5	3.3	3.7	17.1	70.8	46.9	66.4	28.6	49.9	41.6	3.6	1.8	0.4	0.4	0.7	0.8	1.0	0.7	15.0	70.8	
2	0.6	0.7	0.6	0.7	0.9	0.8	0.7	1.2	23.6	83.7	147.4	175.1	189.2	285.0	243.4	239.0	136.6	71.0	17.5	5.7	2.2	1.2	1.5	0.8	67.9	285.0	
3	1.0	1.3	1.2	142.3	1.5	1.6	1.8	5.2	74.3	197.1	168.2	222.3	390.9	240.9	473.2	523.6	483.5	595.0	446.2	480.0	146.2	421.3	1224.6	773.8	292.4	1224.6	
4	342.8	179.2	56.5	42.9	122.6	417.5	287.9	200.9	127.4	3.1	3.1	11.1	7.2	4.8	1.4	1.3	1.1	1.2	1.1	0.7	0.7	0.7	16.8	5.1	76.5	417.5	
5	6.5	5.1	4.1	3.9	3.3	1.8	2.9	3.3	2.5	5.8	4.6	5.5	13.1	9.3	13.5	11.8	14.6	8.4	11.2	10.2	10.8	11.2	2.5	1.5	7.0	14.6	
6	25.1	32.2	41.1	26.2	29.6	4.1	2.6	6.3	32.0	62.8	183.1	778.7	796.8	465.8	310.8	250.4	55.2	6.6	5.7	6.6	13.9	15.2	30.5	7.3	132.9	796.8	
7	7.0	6.3	2.2	5.2	2.2	5.2	4.1	3.4	9.6	14.4	14.3	20.3	253.6	105.7	388.5	296.8	40.9	8.4	6.6	1.9	8.3	148.1	85.0	15.2	60.5	388.5	
8	8.6	5.9	4.2	4.5	13.1	2.1	2.1	11.1	11.8	8.9	5.7	39.8	240.6	125.3	279.7	429.7	164.2	18.5	4.9	12.9	6.9	2.2	3.7	4.1	58.8	429.7	
9	2.4	3.4	9.7	4.3	2.0	2.2	2.0	2.0	2.1	3.0	2.8	9.4	39.4	26.4	262.6	79.8	6.3	5.8	8.3	43.6	19.0	49.7	46.6	27.4	27.5	262.6	
10	14.1	26.6	40.1	975.1	1167.9	1082.6	604.4	946.7	869.3	448.3	512.3	265.8	292.2	171.2	418.2	408.1	321.9	175.1	71.9	2.9	5.7	46.3	21.5	112.8	375.0	1167.9	
11	110.8	13.6	14.8	29.4	133.6	199.5	172.7	43.6	10.3	143.0	200.4	24.1	71.5	219.9	220.3	204.6	49.1	1.0	0.3	0.4	0.6	0.3	0.3	0.1	77.7	220.3	
12	0.3	0.8	0.6	0.8	0.3	0.2	0.4	0.5	1.9	2.0	2.2	0.4	0.2	0.2	0.3	0.4	0.4	0.5	1.8	0.6	1.0	1.1	1.2	1.8	0.8	2.2	
13	2.9	3.6	4.2	5.0	6.3	6.7	7.8	2.7	12.4	8.0	4.9	3.8	3.7	2.5	2.0	2.5	6.6	5.6	2.4	1.4	0.9	0.8	2.1	2.6	4.2	12.4	
14	2.8	5.7	3.9	7.6	7.4	4.0	2.9	1.6	2.4	3.2	32.5	226.6	275.2	249.9	349.6	779.6	403.8	101.4	22.5	28.4	5.6	4.1	7.2	1.1	105.4	779.6	
15	2.7	55.2	8.7	76.0	21.0	1.6	7.4	1.4	56.6	336.8	312.0	146.9	808.9	724.3	681.6	748.3	475.6	422.8	176.5	10.1	3.7	3.9	7.3	3.3	212.2	808.9	
16	0.8	7.8	4.0	2.6	2.3	0.7	6.1	50.0	69.9	37.0	53.5	73.7	34.9	46.3	26.3	30.4	410.4	753.9	321.6	64.4	39.6	122.1	107.6	35.6	95.9	753.9	
17	455.4	303.3	30.5	18.6	1.9	21.5	56.1	16.2	2.5	36.8	194.0	174.6	383.1	336.0	253.5	358.7	515.1	445.2	696.2	855.1	239.5	344.7	992.6	697.8	309.5	992.6	
18	346.7	304.9	420.2	775.3	922.8	1575.5	2099.4	1864.9	1561.4	2059.4	2254.2	1017.1	714.4	619.7	641.0	457.2	300.8	142.1	173.8	221.2	69.2	260.4	260.8	78.0	797.5	2254.2	
19	18.6	9.4	0.7	0.2	3.1	35.2	2.0	2.0	22.9	163.6	502.0	369.4	756.5	679.4	709.4	530.8	293.6	451.1	549.2	454.6	349.4	722.5	556.5	245.5	309.5	756.5	
20	10.8	51.4	6.5	5.1	1.0	3.3	5.8	8.7	10.0	20.0	16.0	8.9	27.9	5.2	15.2	11.7	12.5	19.2	8.6	3.7	1.0	0.8	2.2	1.7	10.7	51.4	
21	3.9	2.4	3.5	2.2	3.9	9.1	4.0	1.5	1.6	4.3	38.5	12.9	249.0	154.5	26.3	12.1	15.1	6.5	3.2	5.6	1.9	1.9	1.9	3.1	23.7	249.0	
22	1.2	1.9	1.9	3.3	1.4	1.6	1.6	1.9	1.6	1.8	29.9	41.4	58.1	58.9	7.4	8.8	12.8	2.8	2.8	2.6	2.9	2.7	3.5	4.9	10.7	58.9	
23	5.6	4.2	3.0	1.3	1.4	1.3	1.0	0.6	0.5	0.4	0.7	0.7	0.7	4.9	3.0	2.7	7.3	9.5	31.2	23.7	15.2	7.1	6.0	5.5	31.2	6.0	
24	2.5	3.0	3.0	5.6	4.0	1.8	2.3	1.9	2.9	3.0	2.7	4.6	4.6	3.6	1.5	2.5	3.7	3.9	1.8	3.6	3.1	2.6	1.8	2.3	3.0	5.6	
25	2.0	2.6	2.5	2.8	2.2	2.3	2.1	2.0	1.7	1.9	2.2	3.1	7.2	5.1	3.5	2.0	1.9	2.1	2.3	2.2	1.8	1.1	1.0	1.1	2.4	7.2	
26	1.3	3.1	1.5	1.1	1.3	1.0	3.5	1.9	11.8	96.2	5.6	6.7	59.9	1.3	29.7	150.8	4.0	2.6	3.5	20.3	2.3	1.9	6.0	4.5	17.6	150.8	
27	2.2	4.0	2.0	0.6	0.8	0.4	1.4	2.1	5.9	15.7	66.6	79.8	241.5	172.5	X	X	X	X	X	X	X	X	X	X	-	-	
28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	
29	X	X	X	X	X	X	X	X	X	X	X	X	X	256.7	242.0	121.1	209.9	131.6	287.3	945.4	754.9	512.4	554.5	408.3	38.4	-	-
30	26.1	4.8	18.0	18.0	2.9	2.4	8.6	3.1	5.1	12.0	15.4	30.5	27.9	121.9	112.8	48.5	55.9	94.9	37.1	22.1	49.3	76.5	29.7	20.1	35.2	121.9	
31	18.9	31.8	109.1	105.7	43.5	75.5	22.0	18.8	12.8	24.5	60.0	152.8	X	147.8	17.9	12.5	9.2	6.2	6.6	11.4	12.3	6.3	5.3	5.5	39.8	152.8	
NO.	29	29	29	29	29	29	29	29	29	29	29	29	30	29	29	29	29	29	29	29	29	29	29	29	697	94%	
MEAN	49.2	37.1	27.7	78.3	86.5	119.5	114.5	110.7	101.7	131.5	169.2	136.3	216.3	175.2	195.4	201.9	135.6	125.8	122.0	105.5	52.9	97.2	132.3	72.5			
MAX	455.4	304.9	420.2	975.1	1167.9	1575.5	2099.4	1864.9	1561.4	2059.4	2254.2	1017.1	808.9	724.3	709.4	779.6	515.1	753.9	945.4	855.1	512.4	722.5	1224.6	773.8			



Number of 24HR Exceedences	8	Proposed Guideline
Number of Non-Zero Readings	697	
Maximum 1-HR Average	2254.2 UG/M3	
Maximum 24-HR Average	797.5 UG/M3	
IZS Calibration Time		Operational Time
Monthly Calibration	0	Operational Uptime
Standard Deviation	261.9	Monthly Average
		697 HRS
		93.7 %
		116.5 UG/M3